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Original Communications.

NEW INTRA-UTERINE PESSARY, WITH NOVEL METHOD OF SECURING IT IN POSITION.

By V. H. TALIAFERRO, M.D., ATLANTA, GA.
Professor of Obstetrics and Diseases of Women in the Atlanta Medical College; President of the Atlanta Academy of Medicine; Secretary of the Board of Health of the State of Georgia.

The objectionable features of the intra-uterine pessaries, are their tendency to excite inflammatory action in the uterine and peri-uterine structures, and the difficulty in retaining them in position. With these overcome, the intra-uterine stem is an instrument of great value, and applicable to a variety of conditions not amenable to other resources, as so often found in flexions, superinvolution, amenorrhœa, sterility, etc.

The rather bulky instruments of Simpson, Kiwisch, and Valliex, adopted with great enthusiasm by their illustrious authors, yielded such unfavorable results as to bring them into much disfavor, and to well nigh cause, for the time being, their entire abandonment.

Of late years, instruments of a more approved construction, together, doubtless, with our greater aptitude at diagnosis, and our better understanding of the contraindications to their use, have contributed, no doubt, to their present popularity with many gynæcologists.

The special points to be observed in the use of the intra-uterine stem are:

1st. A fit sufficiently loose to make no undue pressure at any point, and which at the same time is sufficiently close and secure in position to prevent any free motion of the instrument.

2d. It should be perfectly secured in its position in the cervix, so that no slipping up and down is allowable.

3d. It should cause no pain or uneasiness, either in its introduction or its continued use.

4th. The point of the instrument, when introduced, should extend but little beyond the internal os.

5th. The uterus should be free from any marked tenderness or congestion.

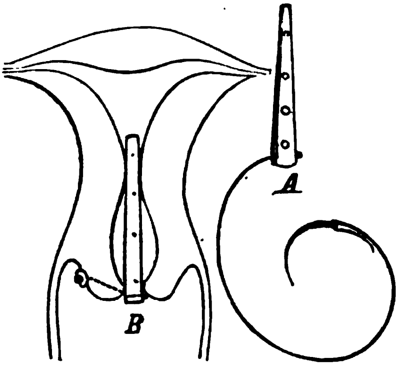
6th. The peri-uterine structures should be soft and elastic, and free from tenderness.

7th. The instrument should be light and simple in construction, flat in shape, and preferably of zinc and copper, or copper alone.

One of the chief difficulties in the use of the intra-uterine stem is to retain it in the uterus. When the uterine canal has its normal axis, any of the ordinary stems with vaginal bulb are readily retained, as the instrument abuts upon the posterior vaginal wall. If, however, as so frequently occurs in displacements, the uterine axis is brought more nearly in coincidence with that of the vagina, then the support of the posterior vaginal wall is gone, and the instrument slips from the uterus into the vagina. Various devices have been resorted to for the purpose of meeting this trouble, all of which I think more or less objectionable. Those with expanding arms, whether of metal or rubber, are most reprehensible.

Sir J. Y. Simpson used the lever pessary for the purpose of directing the os back upon the posterior vaginal wall, upon which the instrument would rest. Prof. Thomas, of New York, uses the lever with a rubber diaphragm as a support for the stem. These, while far preferable to all the means heretofore proposed for retaining the stem in position, are yet objectionable in many cases where it is not desirable to subject the uterus to the double stimulation of a vaginal and intra-uterine pessary. They are again open to the objection that the stem is not *fixed* in its position, and hence capable of a constant upward and downward play, from the almost incessant physiological movemnts of the uterus.

In the simple stem here offered, with the method of securing it, I have endeavored to meet the indications and difficulties mentioned.



The stem, as represented in the wood-cut, with silver wire and needle attached, is made of strips of sheet zinc and copper, such as obtained from the tin-shops, trimmed with stout scissors to any size desired, and the separate strips rivited together. They can be made in any doctor's shop in a little while. The stem is flattened antero-posteriorly, and adapts itself perfectly to the uterine canal without change of the normal relation (antero-posterior approximation) of the walls of the uterus.

The instrument is slightly galvanic, and hence therapeutic as well as mechanical in its action. As will be observed by the wood-cut, its proximal end has secured to it a delicate silver wire, with small curved needle attached. The wire is fixed to the stem by passing it between the zinc and copper plates, and secured with a compressed shot.

To apply the pessary, the patient is placed before a good light, in the semi-prone position, and the uterus exposed with Sims' speculum. The anterior lip of the os is then seized with a tenaculum, and the uterus straightened out in the vaginal axis and steadied, while, with suitable needle forceps, the needle—already attached by delicate silver wire to the stem—is made to pass immediately within the os and out laterally through the cervix, emerging just below the vaginal junction. The point of the needle is then grasped with the forceps and withdrawn. The stem is introduced in the cervix while the wire is being at the same time withdrawn, until both are in position. A small lead button is slipped down the wire, and on this a perforated shot, which is compressed and the wire cut close.

A very correct idea of the operation is conveyed by the wood-cut, with the stem seen secured in position. The stem, as will be seen, is firmly and securely fixed in the cervix, and partakes of every movement of the uterus, and hence incapable of the independent movements and friction of the ordinary *bulb stem* such as now generally used.

When the galvanic stem is not particularly desired, the instrument may be made entirely of copper—one plate instead of two being used, thus making it just half the bulk and weight.

The instrument may be worn, for an indefinite time, without risk of damage or inconvenience to the patient. While using them I direct that, after a few days from the introduction, no check be put upon exercise, either on foot or horseback. The same precautions as to dress are applicable here as in the use of vaginal pessaries, that the uterus may not be forced upon the floor of the pelvis by the pressure of tight clothes or corsets, and subjected to friction and concussions. The vaginal douche, of hot water, should be daily used while the pessary is worn.

CEREBRO-SPINAL FEVER—EPIDEMIC CEREBRO SPINAL MENINGITIS.

BY J. T. BANKS, M.D., GRIFFIN, GA.
Professor of Practice of Medicine in the Atlanta Medical College.

By request, I give you, in brief, some of my views of the above-named disease.

In the months of February and March, 1863, this disease developed itself in a part of Gen. Lee's army, then encamped on the south side of the Rappahannock, eight or ten miles below Fredericksburg. We had been in camp some time before the disease commenced its deadly work. Our camping ground, a hilly woodland about one mile from the river; the weather cold and snowy. We had been having a little more than the usual amount of pneumonia among the troops immediately under my professional care, and a few cases of relapsed malarial fever—intermittent type generally. During the epidemic our camp was moved seven or eight miles; the location healthy and without previous occupation by troops, with no effect on the fatality or epidemic character of the disease. The fatality of that epidemic was about 80 per cent.—subjects generally young and healthy. In some cases it attacked fresh recruits, just from their country homes in Georgia, in a few days after their arrival. Commencing, as they all did, with a prolonged chill, a marked tendency to collapse, and at a time when there were more than the usual number of relapsed intermittents on our sick reports, I at once saw much resemblance in these cases to pernicious intermittents. Close observation of a few cases convinced me that the disease had no dependence upon a malarial cause, although some of the cases behaved almost exactly as I had seen cases of pernicious intermittent years before in Alabama. Then what was the character of the disease? Some favored the idea that it was a malignant form of typhus, others that it was some form of a zymotic disease, developed in and dependent upon camp life. From my notes made at the time, of the nature and cause of the disease, and my observation of it since then, I am forced to regard it as general disease, dependent upon some unknown epidemic influence—a "malignant epidemic fever," as it is now known in the nomenclature of diseases by the College of Physicians in England.

The disease being a specific malignant fever, the usual lesions found after death should be regarded as secondary, and not as a primary and local inflammation. The lesions found in the membranes of the brain and cord should be regarded in the same way, and having perhaps the same relationship to the general disease that the sore throat and catarrh of scarlet fever and measles have to these special diseases. The rapid fatal results, often before any structural lesions can be found, demonstrates the existence of an active malignant cause, producing the general phenomena and character of the disease. Many of the prominent symptoms are caused by the local lesions commonly developed as the disease progresses, as diarrhœa in typhoid fever, and the various rashes in exanthematous diseases.

I have no matured views of its etiology. While some observers say they cannot doubt its contagiousness, others say there is no satisfactory evidence that it is contagious. In my own observation I have seen nothing in locality, occupation, age, or sex that aided or modified its progress; no hygienic rules have been able to hedge it out. I have seen every member of a family attacked. Again, have seen it act as other specific fevers, attack the younger part of a family, and the older escape. I have seen it kill every child, and parents escape every symptom. Like other epidemics, I have observed its modifying influences on other diseases during its epidemic visits. I have seen it attack a pneumonic patient in whom there was not an unfavorable symptom, and destroy life in a few hours. The percentage of deaths in different epidemics range from 20 to 80, and its duration, from its initiatory chill (from which many never react) to one or more days. It is a disease of short duration, probably running its course in 24 to 72 hours; and like most diseases that directly affect the nervous centres, has a periodical character. If inflammatory lesions occur, which is the general rule where the disease continues beyond the second day, convalescence can only be looked forward to as under ordinary circumstances, but with less chances of recovery.

In the treatment of this terrible disease, every effort should be made in the beginning to cut short the initiatory chill, and thereby lessen the chances of destructive lesions, and arrest the tendency to collapse. To this end, external warmth, hot mustard foot-baths, sinapisms to spine and chest and epigastrium, or hot turpentine stupes applied in place of mustard, with a corresponding active internal treatment with alcoholic stimulants, quinine and opium and bromide potassium, and a *rational* counterirritant for any special lesion that may threaten or exist. If inflammatory excitement is developed, the result of local lesions, an appropriate treatment for the special lesion should be given; but the physician should never forget that the local treatment is secondary in a general disease that may be productive of a condition that generally is incompatible with very active depletory measures.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

O. R. FORD, M.D., REPORTER.

ATLANTA, February 27, 1877.

The President, Dr. V. H. Taliaferro, in the chair.

Dr. Calhoun called the attention of the Academy to a case of sympathetic ophthalmia, and the treatment, which consisted in the enucleation of the diseased eye. Also to the length of time after the injury before the appearance of the sympathetic inflammation in the sound eye. The case was one of an old lady, æt. 63. Thirty-three years ago she received an injury in the left eye, through the ciliary bodies, followed by a loss of vision. One year ago vision began to fail in the sound eye, attended by all the prodromic symptoms of sympathetic ophthalmia. The points of special interest are the great length of time after the injury before the appearance of the sympathetic inflammation, namely thirty-three years; the rapid recovery and the rapid extension of the disease; also the remarkable time required for anæsthesia, only five minutes being necessary. Inflammation of the ciliary bodies, either idiopathic or traumatic, is the most frequent cause of sympathetic ophthalmia. When there is an injury through the ciliary bodies, and the vision is lost, it is better to enucleate at once, because, through the resulting irritation, sympathetic inflammation almost invariably follows.

Dr. Baird wished to know what were the evidences of a wound in the ciliary bodies.

Dr. Calhoun explained the position of the ciliary bodies as being immediately behind the corneo-sclerotic junction. Injury to these, when sufficient to destroy the vision, will almost invariably cause sympathetic inflammation in the sound eye. This is according to his experience, and reported statistics. Pain is felt on pressure, and there is usually a corresponding painful point in the other eye after the outburst of the sympathetic inflammation.

Dr. Baird thought there ought to be some undoubted evidence of an injury to the ciliary bodies before enucleation, and inquired as to whether this condition might not occur without a wound; may it not be accidental.

Dr. Calhoun said that his experience convinced him that an injury to the ciliary bodies was the cause of sympathetic inflammation in the majority of cases. When the body is injured it rarely recovers; chronic inflammation supervenes, and any exciting cause suddenly kindles it up. If an injury had ever existed there would be no difficulty in tracing the disease back to it.

Academy adjourned.

ATLANTA, March 6, 1877.

The President, Dr. Taliaferro, in the chair.

Dr. Simpson has recently had some experience with salicylic acid in the treatment of articular rheumatism. He reported a case in which he had given the remedy in the dose of ten grains, repeated every two hours, with marked success. The patient was free from suffering and convalescent in ten days from the attack. The only difficulty experienced in the action of the remedy was that of nausea. He called for the experience of those members who had been in the habit of using it.

Dr. Baird had never used salicylic acid in rheumatism, but had read reports of its successful employment in the treatment of this disease. It is claimed, however, that salicine is equally efficacious, and does not cause the gastric irritation that frequently follows the administration of salicylic acid.

Dr. J. G. Westmoreland said that the treatment of rheumatism with salicylic acid was in line with the quinine treatment, which he had pursued fo. twenty years. It is known, said he, that quinine, salicine, and salicylic acid are invigorators of the spinal cord, and as rheumatism has been found to yield under their action, he finds confirmation of his theory, that the disease essentially depends upon disturbance of this nervous centre.

Dr. Baird said he inferred from Dr. Westmoreland's remarks that he located the seat of the disease in the spinal cord, and asked for his ideas of its pathology.

Dr. Westmoreland: I cannot give the condition of the spinal cord, but I know that it is disturbed. Aside from this the symptoms can be explained only on the idea of nervous derangement. The migratory character of the local manifestations indicates their nervous origin. Pain, soreness and swelling in one joint to-night, may have disappeared by to-morrow, being transferred to some joint on the opposite side of the body. If this local manifestation was the direct result of irritating or poisonous substances in the blood, as many suppose, this sudden transfer would not occur. It is not therefore ordinary inflammation progressing to suppuration. An abscess is never found as the result of true rheumatic inflammation. He has been accustomed to treat this disease with quinine and opium, which he finds sufficient, usually, to effect a cure. Where it fails, he applies a blister to the spinal column. He thought that malaria affected the same part that is disturbed in the production of rheumatism; but in both of the diseases the invigorating effect of quinine or salicine is generally salutary, particularly when used in connection with opium and counter-irritation over the spine. Salicine had failed in his hands, he thinks on account of the smallness of the dose; it requiring at least double the quantity in which quinine is used.

Dr. Todd acquiesced with Dr. Westmoreland in regard to the beneficial results obtained by the application of the blister over the spinal cord. He thinks it is the means of effecting a cure in most instances. He also uses opiates to relieve pain, and administers alkalies to change the acid condition of the urine.

Dr. Taliaferro alluded to the importance of giving opium and quinine in connection. He is of the opinion that the efficacy of the two remedies is greatly increased when given together.

ATLANTA, March 13, 1877.

The President, Dr. Taliaferro, in the chair.

Dr. McIntosh presented a pathological specimen, consisting of the kidneys, urethra, bladder and prostate gland. The specimen was obtained from a man forty-five years old, and shows enlargement of the middle lobe of the prostate, which led to the patient's death by obstructing the passage of urine. The subject had been troubled for five years with difficult micturition and other symptoms of cystitis and prostatitis. Introduction of the catheter being difficult, prostatic enlargement was suspected, and the daily evacuation of a large quantity of very offensive urine and pus with the catheter, and injection of carbolic acid water was continued for five weeks, when worn down by irritation, the patient died; diarrhœa having set in three days before. Subsultus and stupor toward the termination led to suspicion of uræmic poison as a factor in the cause of death. The use of nourishing diet, with tonics, was had from the beginning, and after two weeks, improvement was manifest, the pus being less abundant in urine, and the circulation, which had numbered 112, was reduced to 90. Post-mortem examination revealed the following: Bowels red and congested; bladder inflamed, hypertrophied, and fasciculated; right kidney much contracted; cortical substance very thin; calices and pelvis much dilated; left kidney normal in size. The lateral lobes of prostate were very little enlarged, but the middle lobe projects upward, in almost a globular form, nearly half an inch in diameter, so as to obstruct the urethral canal.

The retained urine doubtless, by its mechanical distention and its decomposition, caused the inflammation and hypertrophy of the bladder; and by the reflex pressure, the dilatation and disintegration of the kidney. The injuries to the kidneys lessened the secreting capacity of the organs, and led to the uræmic poisoning. The great desideratum in the treatment of such cases, therefore, is to keep the bladder emptied regularly and perfectly with the catheter.

Dr. Atlee, of Philadelphia, uses fluid extract ergot in free doses, in addition to the regular evacuation of the urine, and, he thinks, with benefit to the patient.

It was suggested by Guthrie to cut through the perineum, make a permanent fistula, and in this way drain the bladder. This has been done four times by American surgeons. Dr. Sims has made openings into the female bladder, for the relief of obstinate cystitis, which did not yield to other means, and with success. Cystotomy, in one of the four male cases, has been of great benefit. In the three others the result is not known. Older surgeons were in the habit of crushing median prostatic enlargement, through the urethra, but without encouraging success.

I think that the removal of such obstructing portion of the prostate by an opening through the perineum, as in the lateral operation for stone, would be the most rational and promising course, where milder means fail to give relief. Such operation would not necessarily lead to disastrous effects, as is proven by the loss of a portion of the prostate in operation for stone, without serious detriment.

Dr. W. F. Westmoreland said he regarded the pathological specimen as a very interesting one. The growth of the prostate was not sufficiently large to be very readily detected by the ordinary means of diagnosis, and proves that retention of urine may occur from this cause when not suspected. Has used large doses of ergot, sometimes with relief, but not very generally. The plan of injecting iodine with hypodermic syringe into the prostate has been practiced, and while reports of cure by this means have been made, the unpleasant and even fatal results which often follow have measurably destroyed confidence in the measure. The crushing and extracting plans have been attempted, but from the imminent danger of such operations, they are not frequently practiced.

Dr. McIntosh: Why are such operations dangerous?

Dr. Westmoreland: Because it is in the old subject that enlargement of the prostate gland occurs, and such cases do not tolerate serious operations. The dangerous results of crushing and abstraction are: hemorrhage, low forms of inflammation, septicæmia, and exhaustion.

Academy adjourned.

J. S. TODD. M.D., REPORTER.

ATLANTA, March 20, 1877.

Meeting called to order by the President, Dr. V. H. Taliaferro.

Dr. A. W. Calhoun reported the case of a child now five months old, who at this tender age presented quite a pathological museum. For a few days after birth it had yellow fever—its mother suffering from it when it was born, in Savannah during the recent epidemic in that plague-stricken city. It then had congenital central cataract in one eye and purulent ophthalmia, which was followed by total staphyloma in the other. For the latter affection it came under his observation. Staphyloma is a name given by occulists to different protrusions of the anterior surface of the eye.

The ball in this case is enlarged laterally, and bulges one-third of an inch beyond parallel line drawn from point of greatest projection of other eye. The daily growth forward of eye is quite perceptible. The child at present suffers no pain, but atmospheric influences, dust, etc., acting upon it, is a constant source of irritation, which will continue necessarily under the nature of things, and rendered an operation unavoidable. So he decided to perform Crichett's operation. This differs from enucleation in that in the latter surgical procedure the entire ball is taken out; whereas in the former only about half is amputated, which leaves a stump with all the muscles attached, thereby giving all the motions to an artificial eye that are enjoyed by a natural one, the advantages of which are obvious. For the purpose of doing Crichett's amputation, five curved needles, armed with silk ligatures, are inserted at a point on the ball a little behind the juncture of cornea and sclerotic. When this part thus transfixed is cut, you take away the cornea, iris, lens, ciliary bodies, and also part of vitreous humor; the remainder of this substance being prevented from escaping by the stitches, which are then tied and removed generally about the end of seven or eight days. This operation sometimes fails from pan ophthalmitis supervening; the cavity occupied by the vitreous becomes filled with pus and shrinks when this is evacuated; occasionally inflammation extends along the course of the optic nerve to the meninges of the brain; and this is more apt to occur in children than adults. The case to date is progressing favorably.

NOTE.—Perfect success has crowned Dr. C.'s efforts in this case.

Dr. Taliaferro detailed an interesting case of complete cystocele, with hypertrophic elongation of neck of the uterus, successfully treated by Schrœder's operation for narrowing the vagina, performed by himself before the college class.

The unfortunate woman was unable to empty the bladder without the introduction of the catheter. The elongation of the cervix uteri caused it to protrude beyond the vulva. She had had severe attacks of cystitis and disturbances consequent thereupon.

The parts were replaced and the woman confined to the prone posture. Daily dressings of wool, soaked in glycerine, were practiced for fourteen days, when it was found that the depth of uterus had diminished from six to three inches, and that all inflammation had been subdued.

The operations for narrowing the vaginal canal are several. The most usual and popular is probably that of Sims and Emmett, which consists in vivifying the edges of a triangular space in the vaginal mucous membrane, the base above, near the cervix uteri, and apex at lower portion. He objects to this operation because the vagina is folded upon itself, and is apt to break loose from the dragging of an enlarged uterus, and is almost sure to do so if the woman gives birth to children; and when this does occur the patient is left in worse condition than before the attempt at cure.

Dr. Thomas uses a glove stretcher, which is inserted through an incision in the mucous membrane, and with it loosens that membrane from the sub-mucous tissues. He then encloses in a clamp such portion of mucous membrane as he desires or deems necessary, and with a suitable instrument shaves this off; but is often foiled by pus forming, etc.

The operation which he performed, and that of which he most approves, consists in taking out an oval piece of the vaginal mucous membrane, which in this case was two inches in its greatest diameter, it being at the centre of the figure. He used a Sims speculum—that indispensable to most all gynæcological procedures—and side retractors, and marked out with ink the portion of membrane which was to be dissected. The woman was not in the usual position preferred by Sims, but on the back (Simons' position). About eighteen stitches were used to bring the mucous surfaces together. They were alternately deep and narrow, i.e., say the first stitch would go from one edge of cut mucous membrane to the other, thus showing all the thread on the dissected surface; the second would penetrate the mucous membrane at the edge of the incision, and the needle be brought out at the middle of dissected space, and again in this space he inserted it, coming up at opposite edge of wound a little distance in mucous membrane. Thus all the thread was hid from view except at point of insertion, exit, and in the middle of dissected surface.

This procedure he thought was the most effectual mode of preventing pus, should any form, from bagging.

The woman could not wear a pessary; so great was the pressure that it cut through the mucous membrane before the operation, but could now do so with comfort; and he has advised that Albert Smith's pessary—which is a modification of Hodge's—be worn indefinitely.

The success in this case was complete; it now being sixty days since the operation. The sutures were removed on the seventh or eighth day after operation. The hemorrhage consequent upon the operation, contrary to his expectation, was slight. Subinvolution was the cause of all the trouble, and this condition, to some extent, is still a factor in the case. The oval piece of membrane was taken from the anterior surface of the vagina, and extended from cervix to near the meatus urinarius.

Academy adjourned.

Selections.

A Ready Test for Arsenical Compounds.—*By Edward Gaillard, Ph.G.*—Who is the pharmacist that has not been called upon by his patrons or the physicians to know, at once, if this powder or that liquid did not contain ratsbane or arsenic, and often been obliged to make some excuse for the lack of knowledge, or felt the want of a more simple and ready test for the detection of arsenic, than the old, time-honored one of Marsh's. If we have the apparatus, or extemporize one, are we positive that it is free, at all times, of traces of that metal from previous operations? Besides it labors under many serious disadvantages: first, that sulphuric acid; secondly, that metallic zinc, which are employed in the test, may, one or other of them, or even both, contain more or less of arsenic as an impurity, and thus the indications of that substance obtained may not be due to its existing in the suspected matter under investigation. I may add that it is difficult to get, in commerce, zinc and sulphuric acid perfectly free from arsenic.

The test proposed by Edmund W. Davy, professor of forensic medicine in the Royal College of Surgeons, of Ireland, is one of such simplicity, and has proved so practical in my hands that I would recommend it to the pharmacist desiring to be *Probus Paratus*, always ready, at the instant, to decide at once when life and death depend upon his knowledge, and is so easy of execution that it may be performed by almost any one, and found practical for the object stated, especially to those who are not conversant with the details of chemical manipulation. It is a modification of Marsh's test, a well known method, and is founded on the circumstances that nascent hydrogen, in the presence of certain compounds of arsenic, will give rise to the formation of arsinuretted hydrogen; and thus very minute quantities of arsenic, under different circumstances, can be readily detected.

The modification used is the employment of an amalgam of sodium and mercury as a means of generating the hydrogen required for the test, and by the use of this substance do away with, altogether, the necessity of any acid, and employ two metals which are not liable to arsenical contamination. As to sodium, arsenic has never been pointed out as one of its impurities, and as to its presence in mercury, that is a circumstance of very rare occurrence; should it exist in that metal as an impurity, it can be readily removed from it by digesting the mercury in dilute nitric acid, and afterwards well washing it with water.

The amalgam found to answer best for the test consists of one part, by weight, of sodium to eight or ten parts of mercury, and is easily made by heating, moderately, in a test-tube, over a lamp, the mercury, and then adding gradually, in small pieces, the sodum, taking care to keep the mouth of the tube away from the face, if unprotected, lest some of the metal, in an ignited state, might be spurted out during the additions of the first portions.

The metals combine readily under these circumstances, forming an alloy that is liquid whilst hot, but becomes hard and brittle when cold. The contents of the tube, while still hot and liquid, are quickly poured out on a clean plate, when cool broken up for future use, and immediately placed in a stopped bottle. The way to employ this amalgam is simply to place the suspected matter, or solution, along with a little water, in the bottom of a test glass or a tumbler; then add a small bit of amalgam, about the size of a grain of wheat; and, lastly, place, without delay, on the top of the glass a piece of white filtering paper or the cover of a white porcelain crucible, moistened with a drop of a dilute solution of nitrate of silver, slightly acidulated with nitric acid, when, if arsenic is present, a dull black or deep brown stain on the paper, or a dark silvery one on the porcelain, will be quickly developed in the part moistened, owing to the silver of the salt being reduced to a metallic condition by the arseniuretted hydrogen thus evolved.

The silver solution, found to answer well for this purpose, is made by dissolving 20 grains of the nitrate in an ounce of distilled water, adding 2 drops of nitric acid, to render the solution slightly acid. Exceedingly minute quantities of arsenic can be readily detected by this very simple process. Thus one one-thousandth part of a grain of arsenious acid dissolved in 1 cc. of distilled water gives a very decided effect in a few moments, and even a smaller quantity can be detected; as, for example, one drop of Fowler's solution in an ounce of water will indicate in a little time by the blackening of the silver salt. I may further state that the presence of organic matter seems to interfere but little with this test; for I have found that very minute quantities of arsenious acid, when mixed with considerable amounts of milk, tea, coffee, ale or porter, or flour, could, with almost the same facility, be detected by this method, showing the applications are very extended.

Antimony is the only metal which is capable of uniting with nascent hydrogen to form a gas (antimoniuretted hydrogen), which, coming in contact with nitrate of silver, produces black antimonide of that metal; and the blackening of the silver salt from the formation of that compound might be easily mistaken for the effect produced by the arsenical gas.

The fact, first pointed out by Fleitmann, that antimoniuretted hydrogen is not evolved (except, perhaps, as a mere trace) from strongly alkaline solutions, though the conditions may exist there for its formation, and as the action of the sodium amalgam is to render the mixture quickly alkaline, there will be only a very minute quantity of antimony that may be present so evolved; and by previously rendering the mixture strongly alkaline, we may altogether prevent the evolution of that gas.

If, however, we make the mixture containing the antimony in solution first strongly acid, and then add the amalgam, or even acidify after its addition, the antimoniuretted hydrogen will be evolved in abundance, producing a deep black stain on the paper moistened with the nitrate of silver, and, for the purpose of this acidification, tartaric acid answers very well.

As the presence of alkalies in solution does not interfere with the evolution of the arsenical gas, this itself is a means of distinguishing the two metals, arsenic and antimony.—*Am. Journal of Pharmacy.*

EXCISION OF THE RECTUM FOR CARCINOMA.—*Dr. R. J. Levis, Penn Hospital, Philadelphia.*—The patient, upon whom this formidable operation was performed, was a man sixty years of age, who had had symptoms of rectal trouble for about one year. Digital examination showed that there was a nodulated mass occupying the anterior part of the rectal wall, and extending a short distance to the sides. The finger could easily be hooked over the top of the tumor, which, therefore, extended about two and a-half inches up the bowel. After the bowels had been evacuated by a laxative and an enema, the operation was done as follows: After a large bougie had been introduced into the bladder to serve as a guide to the position of, and also to steady the urethra, an incision was made from the base of the scrotum to the coccyx, encircling both sides of the anal aperture. The hand of the operator was then introduced behind the rectum, into the hollow of the sacrum, by which means the bowel was torne loos from its posterior attachments. After this was done, Dr. Levis, by means of his finger and the serrated scissors, broke down the attachment of the viscus around to the front. The cancerous portion was then carefully dissected from the prostate gland and lower part of the bladder, exposing these structures perfectly to view. During these procedures, the vessels were promptly ligated as soon as divided, and double sutures passed through the skin into the rectum above the proposed line of excision. These were not fastened, but left in position in order to give perfect control of the parts.

When the diseased portion had been thoroughly isolated, the gut was drawn forcibly downward by seizing the tumor, and the scissors used to cut through the walls of the bowel. About two and a half inches were thus excised, leaving behind a perfectly soft and smooth mucous surface. The sutures were then shotted, and a few extra ones applied to keep the gut in position, which was, by this means, securely stitched to the surrounding integument. The parts were washed and dressed with carbolized solutions, and, at present, the patient is doing exceedingly well.

This case reminds me of a case of colotomy done in this hospital a few weeks ago, by Dr. T. G. Morton. The woman, when admitted, had such a tight cancerous stricture, that defecation had been impossible for some time. Colotomy was determined upon, and the colon was opened in the left lumbar region. A most curious complication was the finding of a large cyst, probably renal, lying exactly where the colon was expected, and producing a good deal of displacement of parts, which rendered the operation a very difficult one. The patient, who was a very poor subject, died about two days after the operation.—*Archives of Clinical Surgery.*

ON THE TREATMENT OF PROLAPSUS ANI IN INFANTS.—*By Patrick Jamison, M.A., L.R.C.S. Edin.*—Prolapsus ani in very young infants is a fairly manageable ailment, though troublesome to treat, inasmuch as its recurrence may be expected at each act of defecation. Should, however, a young mother or inexperienced nurse fail to recognise the importance of the affection, and allow the intestine to remain prolapsed for any considerable time, the case assumes much graver proportions. A larger amount of gut becomes implicated, and the surgeon experiences greater difficulty in maintaining the reduction when he has succeeded in effecting it.

The expedient which I adopted in the following case may be thought worthy of record.

I was informed that a protrusion of the bowel to the extent of two inches had existed for three weeks; during that time, the mother assured me the protrusion had only been "up" twice, and each time but for five minutes. Three days before I was called the prolapsus had increased, and when I saw it the protrusion measured four inches; was curved and conical, and of a rich red color. The child was a female, fifteen weeks old, well nourished, but its appearance was pitiable to behold. The free margins of the eyelids were red with weeping, the conjunctivæ were bleared and injected, while the irides were clear and bright. The tenesmus was almost constant.

The child had been reared by the bottle, and whenever the teat was offered it hastily and greedily seized it, and sucked as if ravenous with hunger, then suddenly and rapidly did it fling, as it were, the teat from its mouth, and burst into a cry that told full surely the terrible agony it was enduring.

Healthy fæces were freely passed during my visit. On attempting to reduce the prolapse I was met with a resistance equal to several pounds in weight, but by watching the recession of the tenesmus I was enabled to effect complete reduction. No sooner was this accomplished than a stronger effort than ordinary on the part of the child flung out the bowel into its original position. Again I replaced the protrusion, and applied firm pressure across the nates—still unavailingly. The tenesmus overcame every barrier presented, and hurled out the bowel, which recurred to its abnormal position, like a compressed caoutchouc ball resuming its original shape.

On the next occasion I followed the inverted gut with my index finger within the internal spincter, and still finding vigorous pressure, I carried up my finger until it was entirely within the rectum, the knuckles resting on the perineum, and the tip of the digit lying on the left iliac synchondrosis. Here I felt the finger tip grasped by the circular fibres of the bowel, and concluded I had reached the point of invagination. The idea then struck me that if I could continue the use of this organic and sentient bougie long enough to permit the muscular fibres to contract *in situ*, I might hope for the permanent reduction of the prolapse.

Instructing the mother what to do, I rapidly exchanged my finger for hers, and placing the infant on her knee, directed her to maintain the same position for four hours. This she faithfully did; and at the end of that time was rewarded by finding the tenesmus had completly abated, and the bowel remained within the pelvis.

Previous to leaving the child I gave it six minims of liquor morphiæ hydrochloratis, with instructions to the mother to repeat the dose every hour, so long as she felt much pressure on her finger, or if the infant cried bitterly. The mother subsequently informed me that the pressure in the course of half an hour almost ceased, and at the end of four hours her finger, she said, somehow slipped out.

During the succeeding twenty-four hours the bowel protruded slightly five times, but the mother, on the alert, promptly reduced it.

The treatment thus maintained complete reduction of the invaginated portion of the gut; a position of safety not equally assured by the application of external pads.

When I saw the infant on the second day subsequent to the operation the change of facial expression was very striking. The look of anguish had disappeared; the conjunctivæ were clear and limpid; and the child applied itself to its aliment easily and naturally. A frequent cry remained —the shrill, bitter scream due to tormina. The anguished wail which marked the agony produced by invagination and its accompanying tenesmus was gone.—*Obs. Journal.*

CASE ILLUSTRATING THE INFLUENCE OF THE IMAGINATION UPON THE VOLUNTARY MUSCLES.—*By W. H. DeWitt, M.D., Physician at Longview Asylum.*—Elizabeth C., native of Ohio, aged 27 years, single, occupation, none.

The following history was obtained from the patient and her relatives: A maternal uncle and an aunt are insane; a brother died of epilepsy at the age of 35. The patient has been an invalid for five years; has only occasionally been out of bed, and during the five years has not walked a step or borne a pound of weight upon her limbs.

She is a woman of ordinary height, poorly nourished, anæmic, tissues soft and flabby; light complexion, light hair, and blue eyes; upon the whole, rather attractive in appearance; no preternatural heat of the body, pulse frequent and irritable, respirations 22 per minute, tongue frosted, bowels constipated.

The theme of her conversation is upon matters relating to herself and religion. She converses in a most positive, audible tone of voice. Her delusions are of the following character: She firmly believes that she is influenced and governed by some supernatural power, and that her actions are created and controlled by this power. She also imagines that she is suffering from a great variety of physical disorders, such as spinal disease, uterine trouble, etc.; in fact, there is scarcely a disease in the medical vocabulary from which she has not suffered. She affirms that she is not to walk until a higher power than man commands it. Her afflictions have been placed upon her for a wise purpose, to chasten her, and when their mission is fulfilled she will astonish the whole civilized world by her marvelous works. She is a most firm believer in miracles, and affirms one will be wrought upon her.

A most careful examination of her body revealed nothing unusual or of a special abnormal character; absence of both spinal or uterine disease. The muscles of the body have become somewhat atrophied and weakened, more especially those of the lower limbs, no doubt the result of disease. She has not, however, lost the use of any portions of the body; changes her position in bed without assistance, uses her arms and legs with perfect freedom. There seems to be no muscular inhibition worth speaking of, but simply a lack of force or vigor, brought about by want of exercise. The interrupted or faradaic current applied to the extremities produced electro-muscular contraction.

Believing that the inability to walk was in a great measure imaginary, and feeling fully satisfied that there were no physical causes operating to prevent the use of her limbs, I resolved to resort to some stratagem, knowing that her credulity would permit of any amount of imposition being practiced. As before stated, she had long been impressed with the belief that her physical ailments were to be removed by divine interposition, or in her words, the Almighty would restore her to perfect physical health, and at the same time *command* her to walk. Acting upon the supposition that she was led to believe that it had been revealed in a dream that on the night of the 23d of the eighth month (August) the manifestations of divine power she had so long expected would be made; in pursuance of the above all the necessary preparations were made to have a first-class miracle. A tube of considerable length was procured, also materials for lighting up her room. Her faith seemed strong in the truth of the dream, and she awaited the 23d with visible anticipation. The proper time having arrived, the tube was introduced through the window of her room, as nearly over the head of her bed as possible, and the following words enunciated in a solemn and impressive tone: "Elizabeth, daughter of Rebecca, the spirit speaketh unto thee. Thou hast suffered these many years. For my sake thou hast been patient, and now thy *faith* shall make thee whole. Thou hast a great and good work to accomplish; I therefore command thee to walk. From this time forth thou shalt be my servant." Withdrawing the tube, the room was at once illuminated in a most brilliant and dazzling manner. It need only be said that the stratagem worked well. She was found by the night watch walking about her room in a most happy frame of mind; was fully satisfied with the genuineness of the miracle, but believed that others would be performed at no distant time.

From this time forward, up to present date (January 19), she has been walking with the aid of a cane. Her general health has improved very much; her limbs have increased in size and grown comparatively quite strong. She is still at times exceedingly nervous and hysterical. Her mental condition has improved some; she still, however, has delusions, thinks that all has not been done for her that will be done, and is looking forward to other manifestations.

This case clearly illustrates the powerful influence of imagination over the voluntary muscles. The young woman labored under the belief for five years that she could not walk. The belief was created and perpetuated, no doubt, by the delusion that she could not walk until commanded to do so. There are two reasons given by Dr. Carpenter by which actions may become impossible that under ordinary circumstances are performed with ease. First, if a man's mind be entirely possessed with the idea of its *impossibility;* or secondly, if, while his judgment entertains no doubts of success, his attention be distracted by a variety of objects, so that he cannot bring it to bear upon the one effort which may alone be needed. In this particular instance, as in the first example, the mind was no doubt imbued with its impossibility, and therefore no effort was made to use the limbs as a means of support to the body. —*Cincinnati Lancet and Observer.*

A CASE OF BRIGHT'S DISEASE OF MECHANICAL ORIGIN; RELIEF BY OPERATION—*By Samuel B. Ward, A.M., M.D.*—Mrs. C. B., aged 58, American, widow, having a good family history in every way, contracted while residing in China, twenty-five years ago, a diarrhœa, which became chronic, and has had for years past from five to ten movements in the twenty-four hours, being frequently compelled to rise from one to three times at night.

On August 5, 1876, I was sent for to visit her on account of an acute aggravation of her bowel trouble, apparently dependent upon the fatigue incident to a trip to Philadelphia during the very hot weather. Finding that whatever she ate was passing undigested, lacto-peptine was ordered, and after three or four visits she expressed herself as so much relieved that attendance was discontinued.

On August 14th I was sent for again, and found that she had been very imprudent in her diet, and was much worse than when I first saw her—in fact, was seriously ill. The administration of twenty grains of calomel caused a very decided improvement in her condition within a few hours, and, after taking tonics and aids to digestion for a few days, her bowels returned to their habitual condition, and gave no further trouble.

One of the last days in August, at the request of a member of her family, she told me that she suffered severely, at times, with a neuralgia of the left shoulder; that she had curious sensations in her throat, such as led her to suspect that she might have a cancer there; that she had a good deal of dizziness and many unpleasant, indescribable sensations in her head; that she heard unnatural sounds in her ears; that she frequently saw a black cloud, and occasionally bright spots, floating before her eyes; and questioning concerning the urinary function brought out the facts that she was obliged to pass water about every two hours, night and day; that only half an ounce to an ounce was voided at a time; that passing this amount occupied from five to fifteen minutes, the urine escaping only drop by drop, while the act was accompanied by considerable effort and pain; and this condition of things began some years ago, and had been gradually growing worse. Subsequent examination of the urine showed it to contain albumen, the precipitate, after boiling and the addition of nitric acid, settling down to one-fourth or one-fifth of the bulk; the specific gravity was 1008; and the presence of hyaline and granular casts in large numbers was confirmed by the observation of my friend Dr. E. R. Hun. This, however, did not account for the length of time occupied in urination, and on September 1st Dr. James P. Boyd, Jr., saw the patient with me in consultation for the purpose of making a physical examination. We found the vagina so small as to admit the index finger only with difficulty; the uterus retroflexed and atrophied, with a well-marked conical cervix; and it was only after considerable search that we were able to find the orifice of the urethra, the meatus being covered over with a dense membrane, the opening in which would only admit an ordinary silver probe. Without much difficulty a director was substituted for the probe, and with a bistoury we made an incision downward and outward on each side, parallel with the ramus of the pubes, after which a full-sized gum-elastic catheter could readily be passed into the bladder. To prevent any recontraction, the catheter was passed every day for the first week, and every second day during the succeeding ten days, when its use was discontinued. After the trifling operation the patient experienced no delay in passing water when necessary, and no trouble in doing so except a slight burning pain during the first few days. Gradually she became able to retain her urine four or five hours durimg the day, and was not obliged to rise at night. The after-treatment was of the simplest possible kind, consisting of the administration of tonics—iron, quinine and strychnine.

The patient was quite weak for some days after the operation, but gradnally gained strength, and, little by little, all the disagreeable symptoms on the part of the nervous system disappeared. Ten days after the operation chemical examination showed the urine to be free from albumen, and the microscope revealed only a few casts.

October 6th—just five weeks after the operation—it was not possible to find a single cast. The patient says that she feels better than at any time for four or five years past; is going all over the house at her pleasure; and that the diarrhœa of so many years' standing is also disappearing, the number of passages having been reduced to about two in the twenty-four hours.

November 10th.—Examination of the urine shows it to remain free from both albumen and casts. For two or three weeks past she has been going to church and about the streets in pretty much her usual health, the only remaining symptoms being that she occasionally has some slight unpleasant sensations in her head and shoulder. The condition of her bowels has so changed that she is occasionally obliged to take a laxative.

REMARKS.—The interest in this case centres in the fact that the unpleasant and dangerous symptoms, on the part of the nervous system and intestinal tract, seem to have depended upon the Bright's disease. This latter, in turn, seems to have been of purely mechanical origin, depending upon the urethral obstruction. The violent contraction of the bladder which was necessary to overcome this, probably also forced back the urine through the ureters into the kidneys, and gave rise to the trouble which there existed. The diarrhœa appears to to have been only a compensation for the non-performance of their function by the kidneys. Certainly all the abnormal symptoms, some of them of many years' standing, almost entirely disappeared soon after the removal of the obstruction to the flow of urine.—*New York Medical Journal.*

THE RELATION AND HEREDITARY TENDENCY OF INEBRIETY AND EPILEPSY.—*By Edward C. Mann, M.D., Late Medical Superintendent of State Emigrant Insane Asylum, Ward's Island, New York.*—Very little attention has as yet been devoted to the relation and hereditary tendency existing between inebriety and epilepsy, although a very close relation undoubtedly exists between them. Careful examination reveals a large number of persons affected with epilepsy whose parents or ancestors have been addicted to intemperance. There is a very close analogy existing between the paroxysms of a dipsomaniac, where there is often a prodromic stage of nervous disturbance which may incapacitate the patient for mental labor, and the convulsions of an epileptic, whose paroxysms of intense nervous excitement are generally preceded by the "aura epileptica;" the difference being, that in the former case the paroxysm lasts for weeks, perhaps, while in the case of the epileptic it lasts but a few moments. As we often see the two diseases existing in the same person, it becomes impossible not to infer a similarity of origin. We have in both instances accumulated and pent-up nervous force or irritation, which finally expends itself, in the one case, in the unrestrained indulgence—in the irresistible impulse—to indulge in alcoholic stimulants, and in the other, in the convulsive movements of epilepsy. There would seem, beyond all doubt, to be a correlation of force which results in the mutual convertibility of these two diseases. It is not an unusual case to find in the various members of different generations of the same family, different phases of the neuroses, such as insanity, epilepsy, phthisis, chorea, or inebriety, showing, beyond all doubt, correlation of morbific force in hereditary diseases. I believe most firmly that the morbid condition of nerve element, or morbific force induced by inebriety, is indelibly impressed upon, or is transmitted to, the ovum at the time of conception, and that this morbific force lies dormant in the system until developed by an adequate exciting cause, and that the hereditary neurosis thus often skips a generation, leaving no appreciable manifestation of its existence in the intermediate generation. When this morbific force *does* manifest itself, next to the transmission of the pre-disposition to inebriety, comes, unquestionably, epilepsy. From my experience, the children or grandchildren, while infants, are generally affected with convulsions, which may prove fatal, but more often tend to assume an epileptiform type as the child advances in years. I have repeatedly noticed in patients who did not have complete epileptic seizures, *epileptic vertigo,* which passed off almost instantly, but which for the time evidently abolished consciousness, partially, if not entirely. The brain of such children is often morbidly active, and too high pressure in education, or an unnatural forcing process during the formative period of childhood, often results, especially in girls, during the period of constitutional evolution—a time at which the organism is under physiological conditions that pre-dispose to pathological states—in disturbances, primarily, of the organs of respiration, circulation, and digestion; and secondarily, in the production of hysteria and epilepsy, by overstimulating a brain already morbidly active and pre-disposed to disease upon the application of even comparatively trifling exciting cause. Again, consanguinous marriages may be the connecting link between inebriety and epilepsy. I have known cases in which the intermarriage of blood relations, where there was inebriety that had laid dormant for one or two generations, has resulted in the old hereditary neurosis reappearing in the form of epilepsy in the offspring. It is a curious fact, also, that the sons born as the result of union of cousins in marriage, appear to have a strong tendency towards inebriety. The only explanation which I can offer of such cases is, that it is probably the development of the latent morbific force residing in the constitution of the parents, who have a common ancestor, which has been lying dormant for one or two generations, and which is developed in the offspring as the result of the consanguineous marriage. I think that such latent morbific force and hereditary disease is far more common than we generally suppose, and that in many cases, both insanity and inebriety are only the expression of latent disease, elicited by external, accidental causes, rather than as the result of moral or physical causes, to which they are attributed both by the laity and by the profession; the epileptic convulsions occurring as the result of inebriety, depend mainly, I think, upon a two-fold cause, which operates in the production of a morbid irritability of the medulla oblongata. Whether this be a transitory or a constant state, I think is an open question. I am inclined to think that it is a *constant* state, which may, however, for the production of the epileptic paroxysm, require the additional stimulus of transitory cerebral irritation to be transmitted to the medulla oblongata, and perhaps the sympathetic. The two-fold cause which has appeared to me to operate in the production of what I take leave to term *alcoholic epilepsy*, consists, first, in the hyperæmia of the brain, which causes symptoms of irritation, due to increased excitability of the nerve filaments and ganglion cells of the brain, which, by transmitting to the medulla oblongata a morbid irritability, results in epileptiform convulsions; second, a state of cerebral anæmia, which also induces a morbid irritability of the medulla by causing arterial anæmia.

Finally, I believe, that as a result of inebriety, we may have epileptic convulsions occurring, merely from the state of nervous irritation produced in the medulla and at the base of the brain, which excites the motor nerves, from the poisonous and improper character of the blood plasma, produced by the presence in it of alcohol. This is probably often the case, without either very marked anæmia or hyperæmia of the brain. This appears reasonable when we reflect upon the fact that the amount of blood going to the brain constitutes about one-fifth of the whole bulk of the blood. Consequently any poisonous or injurious change in the condition of the usual supply of blood must be very apparent in the encephalic condition, and produces cerebral irritation incompatible with the performance of the healthy function. There is in epilepsy, and more especially in epileptic insanity, a period which sometimes precedes, and sometimes follows the epileptic paroxysm, in which often occurs an abrupt and complete change from a sober, honest, and industrious, to a dissipated, negligent, and lazy man. These attacks often occur periodically in the course of epilepsy, associated with more or less maniacal excitement. During these periods of moral alienation there has often occurred in patients under my charge, an iresistable desire to indulge in alcoholic stimulants to excess, so that for the time, the patient, if not restrained, would pursue a course of inebriety, his reason seeming powerless to control the temporary dipsomania. There is still another class of cases in which the moral insanity takes the place of the epilectic paroxysm, and these cases are also very prone, according to my experience, to be addicted to inebriety if the opportunity of gratifying their morbid impulse occurs. In my observations, and in my study of insanity, I am continually called upon to witness its connection with disease, and more particularly with the hereditary disease, and I have come to believe as I have endeavored to show, that inebriety and epilepsy are mutually convertible diseases. They both depend upon the morbific force, before alluded to, which may remain latent in the nervous system for a long time between the intervals of its manifestation, and although there is a certain dissimilarity in the symptoms between the two diseases, it does not at all follow that they are owing to different causes. The fact of the hereditary disease appearing in different forms in members of the same family and passing from one form to another, leads us to positively infer a correlation of morbific force which leads to this mutual convertibility, which includes not only inebriety and epilepsy, but also, I think, phthisis, skin disease, insanity, scrofula, and perhaps, rheumatism, and gout. In my Asylum practice, I have had ample proof of this, in the existence of the different phases of hereditary disease, and their alternations, both in the same individual and in various members of different generations of the same family. With regard to the treatment of hereditary disease, which I do not propose to take up in this paper, the chief indications point to hygiene and to wise marriages. As we have seen that the symptoms of constitutional diseases are manifested soon after birth in convulsions, or some affection of the nervous system, we must turn our attention to the nourishment and education of the child, and endeavor to exclude everything prejudicial to its future mental and bodily health. By such attention to hygienic rules are we, as physicians, to endeavor to secure an exemption in the rising generation from these hereditary diseases so far as we may, and it is certainly our duty to aim at the eradication of hereditary disease, which, if it is ever accomplished in the future, as we hope it may be, will complete the round of the possibilities of preventive medicine.

Epilepsy occurring in offspring, as the result of inebriety in the progenitors, is complicated with defects or disorders of the mind in various ways, and the manifestations may, with propriety, I think, be classified as follows: 1st. Epileptic idiots, whose intellectual faculties have never been developed. 2d. Epileptics who are imbecile or demented. 3d. Epileptic maniacs, who, without obvious disorder of the mind, when epileptic fits are coming on, are irritable, morose, malicious, and dangerous, and sometimes commit fearful crimes. In some instances the mental disorder takes the form of a paroxysm of acute mania coming on suddenly. 4th. Epileptics whose intellects are not impaired.

Pathology. The pathology of the production of epilepsy in the offspring of intemperate parents is very obscure. The condition of the mother during gestation, if abnormal as in inebriety, cannot fail to interfere with the proper nutrition of the cerebral tissue of the fœtus, and it is in this way, I think, that during embryo life, the brain of the infant often undergoes pathological changes, which induce both deficient moral power and epilepsy. It is certain that any pathological state which destroys the equilibrium of the functions of the organs of the mind, producing depression of some functions and excitement of others, cannot fail to produce in the children of such parents, an ill-balanced and defective state of the nervous system, disposed to take on diseased action. It is probable that there exists in such children, a state of the cerebral vessels which interferes with the uniform and healthy interchange of nutritive plasma passing from the vessels to the brain-cells, and of the fluid-cell contents in a state of degenerate metamorphosis, passing from the cells to the vessels. This state of the cerebal capillaries induces a morbid activity of the cerebral cells, which is in all probability the determining cause of the epileptiform convulsions from which such children suffer. That the functional disturbance resulting in epileptiform convulsions in such children may be due to diverse causes, that is, to anæmia as well as hyperæmia, I have proved to be a fact, as I have found, in two or three instances, the brain and membranes completely bloodless, in children who died in hospital in the midst of convulsions, although I think that the general rule in such cases is more often to find an excessive quantity of blood present.

After numerous dissections of the brains of epileptics both in cases resulting from intemperance, and in cases occurring under ordinary conditions, Foville and Andral agree in their testimony that there is no special lesion attending this malady. Andral insists upon the necessity of distinguishing between those cases in which death occurs in the interval, and those in which the patient dies in a fit, as in the latter class of cases there will be congestion of the cerebral vessels, which is the *effect* and not the *cause* of the fit as some might suppose. I have found that in the cases coming under my charge, in which inebriety in the ancestors could be clearly traced as a predisposing cause, very few, if any of the patients, had been healthy persons previous to the occasion of the disease. That in a great many instances, especially in women, hysteria and other nervous affections had existed previously, and that functional derangements of the nervous system had been of frequent occurrence since infancy. The pathological appearances which have been found by Schroeder Van der Kolk in the medulla oblongata, would seem to show that epileptic convulsions depend generally upon an increased influx of blood to the medulla oblongata; although, as I have previously stated, it is a fact which has been proved by the experiments of Kussmaul and Tenner, in cutting off the arterial blood from the brain, that arterial amæmia is also a cause of epilepsy. Schroeder Van der Kolk found that in the medulla there generally existed a dilatation of the arterioles and capillary vessels, with thickening of their coats. In the cases where arterial anæmia of the medulla is the cause of the epileptic convulsion, it is probably the effect—when it occurs in the inebriate—which the alcohol exerts in producing a transitory spasm of the muscular fibers of the arteries with consequent arterial anæmia.

Prognosis. In epilepsy occurring in the inebriate himself, as the result of the morbid irritability produced in the central nervous system by his excessive drunkenness, we may reasonably expect an ultimate cure, if there is no structural change in the brain which has resulted from the course of inebriety. I have had three such cases of recovery of epileptic patients, in the cases under my charge, during the past year. On the other hand, when disease occurs in the offspring of intemperate ancestors, as the result of the hereditary tendency, it depends more certainly upon structural disease of the brain, and, as a general rule, I have found that the more frequent the recurrence of the epileptic convulsions, in such patients, and the deeper the impression which they leave behind them, the less hope is there of ultimate recovery. —*Quarterly Journal of Inebriety.*

BRONCHITIS.—*By Ross C. Russ, M.D., Hillsboro, O.*—There is perhaps no disease that the human family is more likely to contract than that of bronchitis; no age or condition in life being exempt from it, and not unfrequently is very fatal both to the aged and to the infantile state.

It may also be of the most simple type of catarrhal inflammation to that of the most grave and protracted, not unfrequently compromising the life of the individual whom it attacks. The bronchio-pulmonary membrane, together with its glandular appendages, is the seat of the disease. Considering the normal histological anatomy of this important tissue, it is found to abound with numerous blood-vessels, lymphatics and mucous follicles, together with a flat expansion of epithelial structure, which not only lies as a covering of the mucous tissue, but also invests the follicles. The blood-vessels and lymphatics are exceedingly minute forming a closely set plexus. The incipient stage of the disease is active hyperemia of the minute capillary blood-vessels, thereby producing derangement of the healthy nutrition of the part, and at first producing a diminution of the follicular secretion, but sooner or later it becomes copious, in many cases, and especially in infants, by the augmentation of this secretion interterfering with the normal interchange of gases, and the child (unless relieved) soon becomes asphyxiated. Pathologically considered, while this disease is principally confined to the larger bronchial structure it is not so dangerous, but it too frequently occurs that the inflammation passes from above downward, in the same manner as an erysipelatous inflammation does on the cutaneous surface, producing thereby the more grave form of bronchial inflammation, and is usually designated by some medical writers as capillary bronchitis.

The secretion at this stage of the disease is moreover very copious and tenacious, and its elements, pathologically considered, consists of pus and fibrin, with epithelial cells, together with mucous from the larger tubes.

Bronchial inflammation may effect at this stage of the disease the parenchymatous tissue not as a direct inflammation of that part, but simply as a secondary result. The bronchi becoming obliterated by the excessive secretion, the air gradually finds its way out, though imperfectly, through the obstructed tubes. The expiratory effort, so long as there is air in the vesicles, constantly tends to dislodge the obstructing secretion; therefore, while the entrance of the air is constantly opposed to its exit, the air-vessels of the lobules which are beyond the place of obstruction become completely emptied and collapsed.

The result of the morbid process is solidification of the lobule or lobules of the parenchymatous tissue and not "lobular pneumonia" as hitherto taught by some pathological writers.

The condensed lobule or lobules do not remain in this state, for they suffer from innutrition and sooner or later become shriveled and atrophied, the small bronchial vessels becoming occluded undergo softening and liquefaction.

This stage of the disease not unfrequently puts on a chronic character, with harrassing cough, copious expectoration, and marked anemia simulating tuberculosis, but the differential disagnosis may be easily made out by the accute diagnostician from the physical signs, with the aid of the thermometer. According to my repeated examinations of cases in this disease and in tuberculosis I am convinced, that if there is daily exascerbation with an increase of body temperature, of at least not more than 1-5th of a degree, gradual loss of body and weight, with the physical sign of a peculiar dullness on percussion which is characteristic of tuberculosis; and the absence of the clear resonant sound which is characteristic of bronchial inflamation—discovered by a careful study of the diacrotic phenomena of the symptoms of bronchial inflamation and tuberculosis—the two diseases cannot easily be confounded.

Therefore in the enunciation of bronchial inflammation with its sequelæ, the definite law that a collapse of a lobule or lobules of one lung, not unfrequently eventuates in vesicular emphysema by an increase of volume of those portions of the pulmonary tissue to which the air has access, to compensate for the diminished volume of the collapsed, shriveled, atrophied, and very frequently liquefied portion of the lobule or lobules of the lungs should be considered.

At this stage of the disease the breathing is the greatest difficulty. The patient not unfrequently experiences a dread of suffocation, owing to the imperfect reception and distribution of atmospheric-air into the air-cells of the lungs.

The physical sign of the emphysematous complication of bronchitis is characterized by incompleteness of the expiratory act, the thorax remaining very prominent over the emphysematous lung. Upon percussion a resonant sound is elicited, and also the vesicular murmur is rendered indistinct, owing to the confinement of the air in the dilated air-vesicles.

The autopsical appearance of an emphysematous lung as a complication, is that the dilated air-vesicles may be seen clearly through the pulmonary pleura, and upon close examination of the parts, are found pale and quite white, the lobules dryer than normal and cannot be easily epmtied of air. The capillary vessels are obliterated, caused by the distension of the air-cells, thereby the lobule or lobules suffer by innutrition and ultimately soften and liquefy.

The treatment of bronchial inflammation should be conservative, it being self-limited and cannot be jugulated at once by any medical agent. It is, but too often, that the treatment of this disease is spoliative, depriving the patient of, and interfering with the healthy nutrition of the system. Therefore most, if not, all the medicinal agents designated as expectorants are contra-indicated—by interfering with the function of digestion and assimilation—thereby *lowering the vital forces* of the system, and ultimately producing innutrition. The tendency of bronchial inflammation is to debility; therefore it should be borne in mind, that the alimentary substances constituting the proper elements of nutrition, *i. e.* the aqueous, albuminous, saccharine, and oleaginous, should be given in proper combination and at stated intervals for the maintenance of nutrition. The saccharine and oleaginous should be in excess of the other alimentary substances, for they can be taken in smaller quantity and are greater fat producing materials. It is desirable that the reparation of the tissue should keep *pari passu* with their disintegration.

The medicinal treament for acute bronchial inflammation should be commenced with wine of ipecacuanha, given with the view to unload the bronchi of the excessive secretion, and to allay the irritability of the vagus nerve—but should only be given in the first stage. After the subsidence of the acute stage I have witnessed the best results from the following:

℞	Quinia sulphas,	ʒiij.
	Acid phos. dil.,	ʒss.
	Syr. Tolu,	℥ss.

M.	Aquæ destil.,	℥iij.

Sig.—A desert spoonful every four hours.

The dose should be increased or diminished according to age of the patient, for the very object which is to be obtained is to produce sedation over the turgid and relaxed capillaries of the mucous tissue of the bronchi, at the same time increasing the tonicity of the part.

When this disease assumes a still more grave form with its sequelæ, solidification, and ultimately softening of the lobules of the lung tissue with great innervation of the system, the following should be given:

℞	Spts. vini gallici,	℥vj.
	Glycerin,	℥ij.
M.	Tinct. Hyoscyami,	ʒiij.

Sig.—Teaspoonful every four or five hours.

The dose to be regulated according to age of the patient.

These medicinal agents soothe the harrassing cough, aid digestion, assist assimilation, and *prevent undue tissue change.*

There is perhaps no other disease in which counter-irritation has a better effect than in that of bronchial inflammation, when applied so as to produce a continuous fullness of the cutaneous capillaries of the chest. Baths or sponging with chloride of soda, with friction to the whole cutaneous surface judiciously regulated so as to keep up healthy action in the emunctories, and cause thereby elimination of the morbid products of the system, are highly indicated.

When the cough becomes so harrassing as to deprive the patient of rest—and it should be remembered that sleep has a great tendency to recuperate the enervated system—a hypodermic injection of sulph. morphia and sulph. atropia should be given at bed time. Laxatives only should be given to overcome constipation, 'and then the *Pulv. Glycerrhiza Comp.* of the *Prussian Pharmacopœia*—in doses of a teaspoonful in a wine glass of cold water until an alvine discharge is procured. If diarrhœa exist tannate of bismuth is indicated. These measures with the indications timely met, and the hygienic laws strictly observed and enforced throughout the whole progress of the disease will generally be sufficient for the management of bronchial inflammation and its concomitant sequelæ.—*Cincinnati Lancet and Observer.*

REPORT OF A CASE OF IDIOSYNCRASY IN REGARD TO THE EFFECTS OF QUININE.—*By E. M. Dening, M.D.*—(*Read before the Pathological Society of Columbus, Ohio.*)—In the summer of 1862 was called to see a boy about seven years of age. From his symptoms I supposed he was suffering from a slight attack of intermittent fever, and prescribed quinine. On seeing him again, in the evening of the same day, I was somewhat surprised to find his whole body covered with an apparently scarlatinous eruption, accompanied with intense itching, some fever and general restlessness. Supposing now that I had a case of scarlet fever to deal with instead of intermittent, the quinine was suspended, and the other treatment resorted to. The next day the rash disappeard and the boy recovered without much medication.

Two years subsequently he had a similar attack, which in my mind indicated the use of quinine. and without suspecting its agency in producing the symptoms referred to, we again administered it. The effects which followed were precisely similar to the former occasion, only somewhat intensified.

In twenty minutes after taking the quinine he became red from head to foot, with intense itching over the whole surface; his agitation was great, face swolen, eyes red and suffused, breathing difficult, presenting, altogether the appearance of extreme suffering.

I now became satisfied he had some idiosyncrasy or peculiarity which induced these attacks of urticaria when quinine was administered, and so stated, warning his parents against giving it or allowing any other person to do so, under any circumstances.

In 1864, being absent from the city, this lad was again taken very sick.

The gentleman in whose care I had left my business, called to see him.

The mother of the boy, fearing the doctor might possibly prescribe quinine, explained to him its peculiar effects, and stated that I had cautioned them against its use.

The incredulous smile of the doctor led her to assure him that she had no foolish prejudices against the use of the medicine in question; that they always purchased it by the ounce and were accustomed to use it freely, with and without medical advice.

He made no reply, but wrote his prescription. In a few hours he was again summoned to the house and found the boy in a most alarming condition, all the symptoms we have enumerated being well pronounced. The doctor, on seeing the state of things, was seriously alarmed for the boy.

He was assured, however, by the parents, that the worst was over. On my return home he gave me an account of the case, stating how much he had been frightened, adding, that in all his long experience he had never witnessed similar symptoms, nor apparently greater suffering, finishing by requesting me to report the case.

A few years later this now young man, after having visited Rome, was attacked, on reaching Paris, with what is called Roman Fever. The medical gentleman to whom he applied again prescribed quinine, which he took without suspecting its presence. He was not long, however, in realizing, from the effects produced, that the prescription contained his now too well recognized foe.

Some six or eight years again elapsed, when he had an attack of fever of well marked malarial type, and of more than usual severity.

Knowing but too well his inability to take the appropriate remedy, I determined on trying salicin; but owing to unaccountable misunderstanding he again took five grains of quinine. This was taken during the period of intermission, when he was feeling quite comfortable.

In ten minutes after swallowing it he felt the effects in every fibre of his body; his face became red, his lips and eyelids swollen, and whole features bloated. The effect upon the respiratory passages which soon followed, resembled a violent attack of asthma or hay fever; the posterior nares and trachea seemed swollen to an extent as almost to preclude the access of air, the threatened asphyxia compelling him to breath with his mouth wide open and *alae nasi* unduly distended.

No language could describe the apparent anguish and distress present; every muscle which could exert influence on the respiratory function was brought into violent requisition; his agitation was extreme, compelling him to keep in motion; his bloodshot, eyes and swollen features giving him the most frightful appearance.

After some hours of suffering such as we have endeavored to describe, the secretion of tears became abundant, a profuse discharge from the nostrils occurred, and the symptoms began to subside.

He did not, however, recover his wonted appearance for some days, the itching still persisting to a great extent, accompanied by a weary and exhausted feeling.

The singularity of the case made a strong impression on my mind, as it seems to have done on that of my confrere. I had never witnessed before like results following the administration of quinine, nor seen any case of the kind reported.

No allusion is made in the works on Materia Medica which I have examined to these peculiar effects.

In the October number, however, of the *Annals of Hygiene*, published in Paris, I do find a case reported which is, in every respect, the exact fac simile of mine.

It was meeting with this reported case—the exact resemblance of the two cases—which recalled my attention to the matter, and has induced me to give both the history of my own case and a translation of the case referred to, thinking the matter may not be devoid of interest to at least some member of this Society.

Dr. Adolph Dumas, Adjunct Surgeon of the Hospital de Cetti, says: A female, a distant relation of mine, has for some time presented a singular special sensibility to the action of quinine. Five times in a year, at intervals of several months, she has experienced these symptoms which, on the last occasion, have assumed alarming proportions. The following details of the case I have collected from observation made at the bedside of the patient.

In consequence of a facial neuralgia to which this woman is subject, I ordered her, on the 20th of July, seven P.M., to take two pills containing five grains of quinine.

Owing to an impression which she had received from former experience, that the effects were less unpleasant when not taken on an empty stomach, she was directed to take a slight repast before taking the quinine.

Ten minutes had scarcely elapsed after its ingestion, when she was seized with extreme restlessness and agitation, flushing of the face, tension of the eyelids, and a prickling sensation around the mouth. In ten minutes there was vomiting of part of the porridge she had taken, and judging from its bitterness a portion of the quinine, accompanied with slight oppression of breathing.

By degrees all these symptoms were aggravated: oppression quite strong; respiration hurried; vivid injection of the face and eyelids, which became distended and half closed; eyes red and watery; intense itching of the whole body, especially where there was any constriction by the clothing, which compelled her to undress and go to bed.

I can distinguish, in some places, the elevated urticarious eruption; but generally there is redness without elevation, resembling the scarlatinous eruption; in some places, however, there are real papules which render the part rough to the touch. These latter progressively augmented. The patient scratches herself furiously, excoriating the body in several places; the traces of the nails being at first white, but soon becoming red and remaining so; the agitation is extreme, not a part of her person being free from pungent itching. She suffers much in the palms of the hand and between the fingers and toes.

The itching is much increased by the least change of posture.

The oppression becomes greater and greater; respiration panting and sibilant, which can be heard at a distance, and is seventy-two per minute; pulse 104; temperature, 101.8; has a little dry cough. She expresses, at times, a feeling of impending suffocation, rejecting all covering, although she is not hot. There are moments when her agony is almost unendurable, and at no time does it entirely relent.

A little later the secretion of tears is augmented, and abundant discharge flows from the nostrils, with freqent paroxysms of sneezing.

Eleven o'clock.—Seven hours after taking the quinine the acute suffering commences to diminish, the itching still remaining. I should add that as soon as the symptoms here described were fully developed, the neuralgic paines ceased to a great extent until eleven o'clock, the time at which the habitual exascerbation occurred.

Twelve o'clock.—The coryza, itching, and oppression diminishing in intensity, and the patient commenced to have some moments of repose, interrupted by an occasional exascerbation, especially of the oppressive breathing.

The patient seemed much exhausted and kept her bed for several days, during which her skin, usually soft and delicate, remained rough and furfuraceous.

This was the fourth time, as I observed in the commencement, that I had witnessed a similar effect produced on this young woman from the administration of quinine.

In the first instance the dose being very small (about two grains,) the symptoms, although of the same character, were not so violent, and lasted only about an hour. Being quite unprepared for such a result, I asked myself whether the quinine could be the cause, and as she was quite well the next day, another pill containing the same amount was given, with precisely the same result.

As the patient charged her symptoms to the drug administered, she was unwilling to again resort to its use; to test how much might be due to imagination, I had it administered without her knowledge; the effects were soon over. Three times, the amount taken was only two grains, and on the fourth and last occasion only five grains. It is obvious that the effects produced by the quinine were in proportion to the amount prescribed, as in the last instance they were truly alarming and distressing, although, in this case, a portion of the medicine had been ejected by vomiting.

What would the result have been had a much larger dose been administered? It is probable, however, that the dose here is only of secondary importance, and that the effects are due to the peculiar idiosyncrasy of the individual almost exclusively. In a severe attack of fever which she experienced at that period, eight grammes of the sulphate of quinine were given in divided doses without producing anything but the ordinary effects of the drug.

The accession of the phenomena above described has always been the same, appearing first on the face, lips and eyes; countenance bloated, eyelids swollen, and eyes suffused; following in rapid succession is the intolerable itching of the surface, eruption, and general feeling of tension; the mucuous membrane soon participating in the disturbance, producing rapid and oppressed breathing—a real attack of asthma. A little later a discharge takes place from the nostrils, abundant tears flow from the eyes, the breathing improves, the nervous agitation is less violent, and the patient, exhausted and weak, gradually regains her usual health.—*Ohio Med. Recorder.*

Editorial.

CAUSE OF YELLOW FEVER.

In order to the proper understanding of medical, as well as other discussions, a knowledge of the terms used is indispensable—a uniform definition must be adopted. It is said that yellow fever was imported to Savannah. By this are we to understand that cases of the disease were brought to that city from some other port, or that the poisonous material was brought, and in sufficient quantity to infect the whole people as an epidemic? In the report of our State Board of Health, the term seems to be used ambiguously. The context, in one instance, would seem to favor the former definition, while in another the latter appears to be intended. For example, the fever in Brunswick, as stated in the report, "first appeared in connection with the vessels in the harbor, and gradually spread throughout the town from that quarter." This spreading "throughout the town," is mentioned, doubtless, to prove the communication from one person to another. The case of Lufburrow, who contracted the disease at Station 4½ Central Railroad, by sleeping in a car brought from Savannah, is intended to show that the malaria or poison may be transported. But it is said "the disease did not spread." By this we understand that the disease was not communicable, from one person to another.

Here then we have two instances of the onset of the fever.

In one case the disease was said to be imported *and spread*, which it could not have done under the circumstances, except by personal communication or the local malaria. In the Lufburrow case the poison, not the disease, was said to be imported, and *did not spread*; that is, of course, it was not communicated to others, and there was no local malaria in the neighborhood. If it is personally communicable at one time and place, why is it not at another? Of course persons are more susceptible to diseases under certain circumstances, but when we find in hundreds and even thousands of instances, contact without communication, and not one instance reported in which the disease spread in localities where no malaria existed, we must conclude that malaria is indispensable to the *spreading*. Moreover, malaria was reported and known to exist in the immediate range of the first cases that occurred in Savannah and Macon, and may with propriety be set down as the cause of all the cases that occurred.

Other important facts bearing on this subject must be kept in view, in order to arrive at proper clonclusions. It will be remembered that not only in the epidemic of 1876, but whenever yellow fever has existed in this State, the various other forms of malarial fever were found in connection with it. Furthermore, in the epidemics of 1854 and 1876, the ordinary conditions for the production of malaria were notoriously present in Savannah and Augusta, such as the overflow of the Savannah river and other streams by which marshes, lagoons, etc., were filled, and the water in them gradually subsided under a very high temperature.

The opinion of the Board of Health on this subject strikes us as decidedly equivocal, as before intimated. While there is a *quasi* confession of local malarial origin in one part of the report, in another it is virtually denied in the most emphatic language. Says the report, "and the evidence that the disease may have originated from, or was aggravated by, local causes, is sufficiently strong to arrest our most intelligent attention." Again, the Board thinks there was "no reason why this or any other disease possible to the locality might not have originated in Savannah from the great neglect of its internal hygiene." On the other hand, the Board says: "The question is constantly asked whether any system of quarantine is likely to be effective in preventing invasions of yellow fever. This question may be confidently answered in the affirmative, and it may be stated that the objections to quarantine are largely based upon ignorance of the facts connected with its operation or of the origin of diseases it is designed to limit," etc.

Now if local malaria causes yellow fever, as conceded above, and also in the case of Mr. Lufburrow by malaria brought from Savannah in a car, how is it possible to prevent the disease by quarantine? We confess to "ignorance of the facts connected with its operation," if quarantine will prevent the formation of malaria under circumstances which surrounded Savannah, Augusta, and Macon last summer. The quarantine, it strikes us, would be more reasonably directed against the interior, so as to prevent the rushing water from overflowing and standing upon the marshes and pools by which this pestiferous material is formed.

Malaria generated in Georgia does sometimes produce yellow fever, or it does not. This is the question to be settled. If it does, quarantine cannot prevent the disease, and our labors would be more profitably directed toward the prevention of the condition likely to produce the poison.

For the quarantinists, the report of the Board is unfortunate in alluding to the report of the Health Officer of New York for 1876 as proof of the prevention of yellow fever by quarantine. If importation of cases of the disease only was necessary to infect the city, New York would certainly have been scourged by an epidemic. Three hundred and fifty-five cases were imported to New York harbor, besides two cases by rail introduced into the heart of the city; and yet no well authenticated case occurred among the residents. The Board, also, in a note giving an abstract of the Health Officer's report, misstates the facts—unintentionally no doubt—in regard to the limitation of the vessels to cargo and crew. Passengers were not prohibited except on vessels from Brunswick, Savannah, and Charleston, which would make the trip to New York in less time than the usual period of incubation. Even this precaution did not seem to be necessary, as the two cases above alluded to going through by rail certainly gave every chance for communication, if such were likely to occur, and yet without detriment to the city.

It appears from a tabulated statement of the Board as found in the report, that the idea of importation of yellow fever existed for nearly two hundred years! The first account given of the disease is that of an epidemic in Boston in the year 1693, which was said to have resulted from importation of a case from Barbadoes. Authority for this opinion of importation may therefore be traced back nearly two centuries, and continuously down to the report of our State Board of Health for 1876. In connection with these authorities, we remember the biblical advice, "ask for the old paths—walk therein," and yet we have an ungovernable propensity to inquire as to the correctness of the opinion and the direction of the paths. Still more ancient was the opinion that the touching of a wound with the weapon that made it would prove salutary. The same tendency has continued to the present day, and now attacks our credulity in the form of a buckeye in the pocket for the cure of hemorrhoids.

The truth is, this idea of importation is plausible. Commercial intercourse is very general; nay, we may say universal, directly or indirectly. It is hard to get off the line of commercial intercommunication, and it matters not where the fever may appear, the transfer of goods from, or personal communication with, some tropical port where fever exists the year round, may be traced. A ship was in port of Charleston from Havana, and an epidemic of yellow fever followed—the sword was slightly passed over the wound it had made, and the healing process followed. Now, in these instances we forget the fact, that often ships from infected ports, with yellow fever aboard, land at Atlantic ports in hot weather, as at New York last summer, and *no epidemic* follows; the sword is not applied to the wound, and yet it heals; the buckeye is worn in the pocket for years, and yet the piles continue.

The cities of our Atlantic coast affected with the epidemic in 1876, had no unusual intercourse with tropical yellow fever ports, and perhaps less than previous summers, when no disease followed. The unusual amount of rain during the summer, and excessively warm weather, satisfactorily account for the scourge.

We find our views on this subject corroborated, in the main, by those of Surgeon Robert T. Murray, as expressed in his report of the epidemic of yellow fever at Key West in 1875, to the Supervising Surgeon-General at Washington. The importation doctrine is virtually condemned by Dr. Murray, and conclusive evidence of its indigenous origin afforded. The treatment he adopted is that which is universaily used for the cure of other forms of malarial fever—quinine, five to ten grains every four hours, being one of the principal remedies. The death-rate was about twenty per cent., showing less than the usual mortality in epidemics of malignant fever.

The report closes with the remark, "that it is absolutely non-contagious and non-infectious in the sense that small-pox is contagious and typhus is infectious. Also that when the disease occurs, sick and well should be removed to healthy localities without delay."

Brunswick is said to afford incontestible evidence of importation, not only in the case of Mrs. West who was taken sick the day after going aboard the "Ed Johnson," but in the sickness and death of Capt. Bean, and in the first cases occurring in the neighborhood where ballast from the "Spanish vessel" "Maretta" was discharged, and spreading eastward against the prevailing wind.

On a former occasion we called in question the possibility of one day being sufficient time of incubation, and upon further investigation we find that no fever had been on the "Johnson," nor even the Spanish vessel "Maretta," since her arrival nor on her voyage, and furthermore that Capt. Bean, of the former vessel, who died of the fever, had come to Brunswick ten or fifteen days before his attack, from the North, by railroad, passing through Atlanta; and that his vessel, in command of the mate, was taking her cargo when he arrived. He was taken sick at his lodgings in town, and was carried to the hotel where he died.

We also learn from a reliable physician of Brunswick that serious cases of fever occurred before the "Johnson" or "Maretta" came in port, on account of which he had sent his family off about the first week of August.

He also states that brake-bone fever prevailed a few years ago, under the prevalence also of an east wind, as that of last year. This could not have been imported, and why the fever by or before the first of August in 1876, and the brake-bone fever previously, if not the result of malaria? This poison, then, is produced on the coast, and is wafted from the rice fields at a distance or from some other point of its production. This is sufficient to account for yellow-fever, brakebone, malignant remittent, intermittent or hæmaturial fever.

ANTISEPTIC SURGERY.—The operation of ovariotomy made by Dr. Marion Sims in November last was published in the *Reporter*. The tumor weighed fifteen pounds, and the operation lasted forty minutes. The carbolic spray was applied the whole time, the hands, instruments and sponges having been carbolized before commencing the extirpation.

In this publication it is claimed that Dr. Sims was the first to do this operation antiseptically; but the *London Lancet* denies the justice of his claim, and is "somewhat surprised that he should have entertained such a misconception."

Septicæmia, ulceration, and the formation of pus, which so frequently interfere with recovery from surgical operations, are prevented, it is said, by the antiseptic procedure. Conveniences for this purpose should, therefore, be at the command of surgeons for operations generally. While in all cases the process may not be required, yet, if the theory should be established as correct, the exceptional cases are not very certainly determined, and as no detriment is likely to result in any, its universal application would seem to be called for.

ATLANTA MEDICAL COLLEGE.—The annual commencement of this institution was held on the first day of March, after a course of four and a-half months. The degree of Doctor in Medicine, was conferred on twenty-two applicants, by Col. Wm. L. Mitchell, one of the Trustees, appointed by the Board for this service.

The prize, a case of surgical instruments, offered by the Faculty for the greatest proficiency, as exhibited in the general examination, was awarded to J. W. Williams, of Missouri. He was the fortunate recipient also of the ophthalmoscope offered by the Professor of Diseases of the Eye and Ear, for the best essay on this branch.

The presentation of prizes was made by Gen. W. S. Walker, preceeded by an appropriate address to the graduates.

Prof. Wm. Abram Love delivered the valedictory address on the part of the Faculty, and J. W. Williams on the part of the class.

The following names form the catalogue of graduates for the session of 1876–7:

Adams, Wm. Edgar, Greensboro, Ga.
Ansley, J. S., Pigeon Creek, Ala.
Boyd, Chas., Atlanta, Ga.
Brown, G. W., Brownsville, Ala.
Bullard, W. L., Tennille, Ga.
Cook, R. A., Covington, Ga.
Findlay, C. D., Twiggsville, Ga.
Goldin, W. F., Buchanan, Ga.
Greer, L. C., Beaverdale, Ga.
Haynes, Micajah, Red Clay, Ga.
Howell, D. H., Atlanta, Ga.
Jackson, J. T., Thomaston, Ga.
Martin. J. G., Milner, Ga.
Perry, C. F., LaFayette, Ala.
Smith, H. M., Newnan, Ga.
Smith, J. Horace, Smyrna, Ga.
Spears, A. F., Madison, Ga.
Statham, J. P., Long Cane, Ga.
Ticknor, D. C., Columbus, Ga.
Walker, G. T., Greeneville, S. C.
Weaver, J. L., Cochran, Ga.
Williams, J. W., Farmington, Mo.

Medical Association of Georgia.—The annual meeting of this body, for the year 1877, will be held in Macon on the third Wednesday (18th) of April, inst., and continue three days.

The location selected being convenient to a large number of physicians, a full attendance and quite an accession of new members may be expected. Doubtless the profession of Macon will strive to make the occasion an enjoyable one, in addition to the great feast these annual scientific discussions afford.

In Memoriam.—We learn from the *Southern Argus*, a newspaper published at Selma, Ala., of a loss the medical profession has sustained in the death of Dr. Samuel W. Vaughan, of Summerfield, Ala. He died on the 20th of December last, in the 77th year of his age. From youth he had been devoted to the science and practice of his profession, and with ability discharged the duties it imposed. Though for several years previous to, and during the war, he had somewhat relaxed from active practice, yet after the immense loss sustained by that destructive conflict, he again assumed the labor incident to a general practice.

We have known of Dr. Vaughan for many years, and have had the pleasure of an intimate acquaintance with two of his sons, who graduated in the Medical College of this city, with distinction. While it is unreasonable to expect the services of one so ripe in years to be prolonged to the extent we might desire, a vein of sadness and regret passes through us at the loss of an honorable, upright citizen and useful member of the medical profession. Peace to his remains!

We find on our table two short papers from the pen of Dr. G. S. Trezevent; one on "a case of paroxysmal hæmaturia," and the other on "effects of physostigma in convulsive disease of children."

In the first-named monogram we are reminded of the various phases assumed by malarial disease. Hæmaturia and hæmatomesis seem to comprise the forms of hemorrhagic difficulty attending the forms of miasmatic fever. Malignancy, the result of a more virulent quality of the poison, leads to that more devitalized condition of the tissues, allowing the slow escape of blood through the mucous membranes. Hence, black vomit and hæmaturia are found in yellow fever and the hæmaturial fever of Southwestern Georgia and Southern Alabama.

Dr. Trezevent found quinine the great spinal tonic, to relieve the "paroxysmal hæmaturia," of which his paper treats, and takes the proper view of the pathological condition of the spinal and sympathetic system of nerves in the production of all forms of malarial disease.

In the paper on the "effects of physostigma," we have confirmation of the benefit derived from calabar bean in the treatment of reflex convulsive disease.

STONE MOUNTAIN, April 5, 1877.

MESSRS. EDITORS: The following report of a case of osteo-cartilaginous deposit in the knee joint may be of interest to some one of your readers, and so, if you deem it worthy the space in your Journal, you are welcome to it:

M. C., col., æt. 65, came to me February 1, 1876, complaining of his knee hurting him, with inability to walk. Upon examination I found a hard circumscribed tumor situated within the synovial membrane. I could move it from external condyle, under the quadriceps extensor, to the internal condyle. The patient stated that he first noticed it about ten years ago, and that it had been gradually growing since that time. He also stated that he had been a sufferer from rheumatism all his life, up to within a few years since. Upon the danger and necessity of an operation for its removal being explained to him, and his consent being obtained, on Feb. 6, 1876, assisted by Dr. Thomas Wootten, I proceeded to operate.

The tumor being brought around over the internal condyle, was grasped by thumb and finger, and a longitudinal incision two inches long was made into the synovial sac. This was followed by escape of the fluid with the body accompanying it, as it was retained by no attachments. It was found to be in shape superiorly convex, inferiorly concave, one and a half inches long, three quarters wide, and one-half inch thick.

The edges of the wound were brought together and retained by adhesive strips, and the leg placed comfortably on a well padded splint with oilcloth covering; perfect quiet was enjoined. When I saw him again, on the night of the 7th, some tumefaction and a little pain was present. Ordered ice cold applications and perfect quiet, with the occasional administration of an opiate.

The wound healed by the first intention, without much constitutional disturbance; considerable tumefaction with scarcely any pain was, for awhile, noticed. This was probably the result of irritation to the synovial membrane and an increased secretion of synovia. He was kept in bed until all inflammation had subsided, and then instructed to use crutches for a month as a safeguard against any irritating tendency from use of the joint.

I saw him again on March 4, 1877, and found him perfectly well, and with complete use of the affected joint.

Very truly, Chas. L. Summey, M.D.

A Comparison of the Operations for Vesico-Vaginal Fistula of N. Bozeman, M.D., New York, and Prof. Gustav. Simon Heidelberg, in a pamphlet published by A. D. Bernays, M.D., of St. Louis, Mo., is before us. This translation is published by the translator in order to correct some errors on the part of Dr. Bozeman in regard to the matter.

The principal point noticed in this comparison is the more perfect simplicity of Simon's operation, with a showing of as good statistical results, if not better than Bozeman's. While Simon places the patient in coccygeo-dorsal position for operating, Bozeman operates in the genu-pectoral. Simon uses silk sutures, and very indifferent after-treatment, while Bozeman applies silver and button sutures and careful after-treatment.

In fact, it seems to us about "six one way and a half dozen the other," and the comparison narrows down to a question of the time required to operate.

BOSTON MEDICAL LIBRARY ASSOCIATION

American Medical Association.—The twenty-eighth annual session will be held in the city of Chicago, Ill., on Tuesday, June 5, 1877, in Farwell Hall, at 11 a.m.

"The delegates shall receive their appointment from permanently organized State medical societies, and such county and district medical societies as are recognized by *representation in their respective State societies*, and from the Medical Department of the Army and Navy of the United States."

"Each State, county, and district medical society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of medical societies as above designated are earnestly requested to forward, *at once*, lists of their delegates, with residences, in order that a correct record may be made of all who are in affiliation with this body.

Wm. B. Atkinson, M.D.,
Permanent Secretary.

1400 Pine Street, Philadelphia.

Catalogue of Exchanges.—American Clinical lectures, New York; American Journal of Microscopy, New York; American Journal of the Medical Sciences, Philadelphia; American Journal of Pharmacy, Philadelphia; American Medical Bi-Weekly, Louisville, Ky.; American Practitioner, Indianapolis, Indiana; Archives of Clinical Surgery, New York; Archives of Dermatology, New York; Baltimore Physician and Surgeon, Baltimore, Md.; Boston Journal of Chemistry, Boston, Mass.; Boston Medical and Surgical Journal, Boston, Mass.; Braithwait's Retrospect, New York; Buffalo Medical and Surgical Journal, Buffalo, New York; Canada Journal of Medical Sciences, Toronto, Canada; Cincinnati Lancet and Observer, Cincinnati, O.; Detroit medical Journal, Detroit, Mich.; Druggists' Advertiser, New York; Druggists' Circular, New York; Half Yearly Compendium of Medical Sciences, Philadelphia; Herald of Health, New York; Journal of Materia Medica, New Lebanon, N. Y.; Journal of Nervous and Mental Diseases, Chicago, Ill.; London Lancet, New York; Louisville Medical News, Louisville, Ky.; Medical and Surgical Reporter, Philadelphia, Pa.; Medical Brief, St. Louis, Mo.; Medical Eclectic, New York; Medical Intelligencer, Philadelphia, Pa.; Medical Journal and Examiner, Chicago, Ill.; Medical News and Library, Philadelphia, Penn.; Medical Record, New York; Metric Bulletin, Boston, Mass.; Monthly Abstract of Medical Science; Philadelphia, Pa.; Nashville Journal of Medicine and Surgery, Nashville, Tenn.; New Orleans Medical and Surgical Journal, New Orleans, La.; Obstetrical Journal, Philadelphia, Pa.; Ohio Medical Record, Columbus, O.; Oregon Medical Journal, Salem, Oregon; Pacific Medical and Surgical Journal, San Francisco, Cal.; Philadelphia Medical Times, Philadelphia, Pa., Physician and Pharmacist, New York; Quarterly Journal, Hartford, Conn.; Richmond and Louisville Medical Journal, Louisville, Ky.; Saint Louis Clinical Record, Saint Louis, Mo.; Saint Louis Medical and Surgical Journal, Saint Louis, Mo.; Sanitarian, New York; Texas Medical Journal, Galveston, Texas; The Clinic, Cincinnati, O.; Toledo Medical and Surgical Journal, Toledo, O.; Virginia Medical Monthly, Richmond, Va.; Western Lancet, San Francisco, Cal.

EXCERPTA.

Local Uses of Chloral.—In the London correspondence of the *Medical Times*, December 23d, some interesting statements are made of local applications of chloral by Dr. Dowse, Superintendent of the Highgate Infirmary. He has found it useful as an application to recent flaps after amputation. By such application there is not only relief from local pain afforded, but the unpleasant sensations felt in the extremities of the lost limbs, as in the toes, for instance, after amputation of leg, have also been avoided. When injected betwixt the flaps it relieves the reflex startings so commonly present. The use of chloral, as an external application to sores, etc., took its origin, with Dr. Dowse, at least, in a sort of despair as to what to do in case of fungus hæmatodes of the mamma. All sorts of disinfectants had been applied without satisfactory results, so chloral was tried, with such good effects that further trial of it was made. A few cases briefly stated will illustrate its action. When applied to a large cancerous sore on the top of the head, it not only relieved the pain, but the discharge, previously most offensive, was greatly improved and rendered less offensive. In a case of cancerous ulceration of the os uteri, in combination with chloride of zinc, great relief was experienced. An impetiginoid eczema of the face; which was obstinate and painful, yielded to a solution of chloral and glycerine. The relief from pain was complete, and, in a few days, the surface began to clean, and healed rapidly. In a case of osteo-arthritis, where the pain was very intense in the knees, which were so tender that the least touch was intolerable, flannels wrung out of a hot solution of chloral gave the greatest relief.—*Western Lancet.*

NERVOUSNESS AND NERVINES.—Nervousness is one of the prices we have to pay for civilization; the nervous savage is a being unheard of. For this disorder, which is partly of mental and partly of bodily nature, relief is sought in various ways, and among these we may place the employment of narcotics. The temporary relief afforded by these drugs is very apt to lead those who suffer from nervous sensations to put too much trust in and resort too frequently to them. In the long run they prove most destructive to health. Their use has of late become so frequent as to threaten society with a serious evil. It has been boldly contended that chloral is to be found in the work-boxes and baskets of nearly every lady in the west end of the metropolis, "to calm her nerves." No doubt this is an exaggeration, but it is a fact that New York chloral punch had become an institution scarcely a year after the introduction of chloral into medical practice, and now it turns out that Germany—"sober, orderly, paternally-ruled Germany"—has such a thing as morphia disease spreading among its population. The symptoms are not unlike those of opium eating. Experience suggests that persons suffering from this disease should at once be deprived of the drug. Their willfulness and liability to relapse, however, are so great, that it is said that only about twenty-five per cent. have been seen to recover in a large series of cases.—*Cassell's Magazine.*

THE USE OF WATER TO RELIEVE PAIN.—The hypodermic use of water for relieving pain continues to afford an interesting object for experiment. The evidence in its favor could not be stronger, although little attempt is made to explain to us why or how water should quiet pain. Dr. Lafitte of Nantes has used water subcutaneously since 1872, when he succeeded in immediately relieving pain in a woman who was suffering most acutely from lumbago. Eight grmm. of distilled water was injected, and the pain did not return. In cases of sciatica, supra-orbital and facial neuralgia, as well as in intercostal neuralgia and rheumatic affections of the joints, he has found water injected subcutaneously quite as useful as morphia. Dr. Pillet speaks highly of hypodermic injections of water in lumbago and intercostal neuralgia. Dr. Lelut says that for the last three months he has used the pure water injections, with the best results. He relates how he came to use it. His servant one day upset the bottle containing his morphia solution for subcutaneous injections, and, to conceal her clumsiness, filled the bottle with ordinary water. Dr. Lelut, not knowing this, injected the water into the thigh of a patient who was suffering severely from sciatica, and whom he was treating by the subcutaneous injection of morphia. The patient was astonished at the instant relief of the pain, and said: "What kind of a liquid is this you are using which causes me no uneasiness or no sickness at the stomach like the former?" Since then Dr. Lelut has used nothing subcutaneously but water.

Dr. Dresch praises the usefulness of this injection, especially in muscular rheumatism. He also tells of a case of osteo-sarcoma of the thigh, in which he used daily 60 ctgm. of morphia subcutaneously, chloral, cicuta and other remedies, and where hypodermic injections of water succeeded in relieving the pain quite as well as morphia, without producing the disagreeable constitutional effects of that drug. Dr. Dresch does not use simple water, but prefers peppermint water.

Dr. Burney Yeo, of London, says he found subcutaneous injections of water useful in relieving the pain of a patient suffering from thoracic aneurism.—*Western Lancet.*

ON THE IMMEDIATE CURE OF PILES.—Mr. Reeves, of Edinburgh, has adopted a plan of treating internal piles to which he has given the term "immediate cure." The operation is rapid and the entire treatment short, as compared with the ordinary method, viz., by nitric acid, ligature, clamp and cautery. He thinks, moreover, that it is free from danger and does not always require an anæsthetic. The piles being well down, are punctured to their bases by the conical tip of the gas cautery (Dr Paquelin's). The number of the punctures varies with the number and size of the piles, a pile the size of a half walnut requiring two or three. A dull red heat should be employed, and the point of the instrument is to be gently rotated while it is within; otherwise a portion of the eschar will be withdrawn, and then hemorrhage may ensue. Ulcers or fissures should be cauterized at the same time. Should there be any oozing, a touch of the cautery will stop it. The piles are then to be returned and a half-grain morphia suppository inserted. After the bowels have been confined for four or five days, a warm injection is to be given, and followed upon the succeeding day by a laxative. At the expiration of a week the patients are discharged. Of eighteen cases thus operated on, two were not allowed out for ten days, and one for a fortnight, but in these cases there was some uterine or urinary complication. All the patients were examined subsequently, and it was exceedingly difficult to discover by the finger or the speculum that there were any cicatrices following the operation.—*Lancet.*

CHOOSING A PHYSICIAN.—"To choose a physician," as Lady Mountcashel has well remarked, "one should be half a physician one's self; but as this is not the case with many, the best plan which a mother of a family can adopt is to select a man whose education has been suitable to his profession, whose habits of life are such as prove that he continues to acquire both practical and theoretical knowledge, who is neither a bigot in old opinions nor an enthusiast in new; and, for many reasons, not the fashionable doctor of the day. A little attention in making the necessary inquiries will suffice to ascertain the requisites here specified; to which should be added what are usually found in medical men of real worth, those qualities which should serve to render him an agreeable companion; for the family physician should always be the family friend."

A YOUNG MOTHER.—An esteemed and entirely trustworthy correspondent has furnished us with the following facts touching a case which came under his observation. As an instance of early maternity, the case is one which certainly vies with any case on record: The girl first menstruated when ten years and six months of age. She became pregnant at eleven years and six months, and was safely delivered of a male child January 19, 1875. The reputed father of the child was at the time a hopeful of fourteen years of age. The child is still alive, but not very strong or bright, though the promising parents are doing as well as could be expected.—*Detroit Medical Journal.*

DIPLOMA SELLING.—We supposed the diploma trade could exist only in some big, bad city—Philadelphia, for example; but some facts that have just come to our knowledge show that this corruption can spread to the country, and establish its fountain of evil there. Arcadia, a pleasant village in Hamilton county, Indiana—Arcadia, the very name suggestive of Eden-like peace and purity!—it seems was the seat of a new tempter who was offering "diplomas from the best schools at home and abroad."

We publish *verbatim* one of the tempter's letters addressed to a reputable physician who, unfortunately for the success of the scheme, was a graduate. But at any rate one who could bite at such a bait would be sillier than the youngest minnow that ever sacrificed its life upon a crooked pin. And the doctor himself—the doctor so generous in offering diplomas to others—when and how did he get his diploma? However, it is well enough for the profession to be warned in regard to this disreputable business. Here is the letter, written from Arcadia—written, too, on Christmas day! Place and day that should be sacred; is this not the climax of crime?

"ARCADIA, IND., Dec. 25th, 1876.

Confidential Strictly:

DR. ———

DEAR SIR: Under the above rule let me ask of you if you have ever obtained a Diploma, if not, would you like to obtain one.

If you are interested in this, come up and see me to-morrow.

Yours, truly,

J. G. D. PETTIJOHN.

Please do not mention this to any one."—*American Practitioner.*

A SUCCESSFUL CASE OF CÆSARIAN SECTION, IN WHICH SILVER SUTURES WERE USED FOR THE UTERINE WOUND.—Dr. Lungren, of Toledo, U. S., relates the case of a patient, aged twenty-nine, the subject of severe rachitic deformity of the pelvis. She married at the age of twenty-one, and became pregnant four times. The first time the fœtus perished about the sixth month and was spontaneously expelled about a week after. The second time abortion was induced at the third month. The third time abortion occured from unknown causes at the fourth month. In her fourth pregnancy she came under observation at the seventh month. Dr. Lungren decided to induce premature labour, and commenced to do so by dilating the os with Molesworth's elastic dilators. This was done until the largest dilator was reached, and it was then found that there was an unexpected degree of contraction at the brim. The promontory of the sacrum reached into the centre of the cavity, resembling a fœtal head, and the maximum antero-posterior diameter did not exceed from two and a quarter to two and a half inches. The membranes not having been ruptured, it was resolved to abandon the induction of labour, and let matters go on to full term.

Labour commenced on May 8th, 1875. The operation of Cæsarian section was undertaken when the os uteri was dilated to about an inch, filled with the pouch of liquor amnii. A final examination having been made under chloroform, it was thought that embryotomy would be so dificult as to be very dangerous to the mother, while it would certainly sacrifice the child. The placenta was found to be attached at the anterior surface of the uterus, and was wounded before the incision in its walls was extended to a length of two inches. Upon this the membranes were ruptured by the vaginia, to prevent the liquor amnii from escaping into the peritoneal cavity. The uterine wound was then enlarged to a length of six inches, and the fœtus was extracted by the head. It was alive, and immediately began to cry. The placenta was removed directly after. At this moment profuse hæmorrhage occurred, but by grasping the uterus with both hands, some contraction was induced, and the bleeding partially checked. The edges of the uterine wound, however, gaped widely, and blood continued to escape through the opening. Four sutures of silver wire were then inserted through the uterine wall, passing just short of its mucous membrane. Each wire was twisted twice only, care being taken to bring the edges of the peritoneum in apposition, then cut short and the ends bent down in the wound. The hæmorrhage was then arrested. After sponging out the peritoneum, the abdominal wound was at once closed.

For the first twenty-four hours there was rather acute pain, but after the first day the pulse never rose above 80, nor temperature above 100·5°. Five weeks after the operation she was attending to her household duties and washing the household linen.—*Reported in Archives de Tocologies, January,* 1877.

WOOD RENDERED INCOMBUSTIBLE.—It has been demonstrated by the most rigid experiments that wood immersed in a "pickle" of a solution of tungstate of soda cannot be ignited under any of the ordinary conditions to which it may be exposed. The tungstate is made by the addition of tungstate of lime to hydrochloric acid and salt, affording as a by-product chloride of lime in large quantities. The action of the tungstate upon soft woods is to render them quite hard as well as incombustible, and it also acts as a preventive against dry rot.

Sticks and boards of the prepared wood have been saturated with kerosene oil and set on fire; the oil burned off entirely without igniting the wood. Two small houses have been built, one of ordinary pine wood, the other of the prepared wood, and fires of great urgency kindled in each. The onc of ordinary wood was quickly consumed, while the other was left only slightly charred.

There is no doubt that all the wood-work of theatres can be made practically incombustible, and at no very great cost. A bath of the tungstate of soda, consisting of several thousand gallons, can be employed, and sufficient wood to construct all the scenery and appliances of a theatre can be prepared in a few weeks' time, and the painted canvas also can be treated in the same way. Even if oil colors were used on the canvas, we think it could not be readily ignited.

The attention of theatre managers should be called to this subject, and the authorities of cities should insist upon having every means used which modern science suggests to prevent fires in public buildings.—*Boston Journal of Chemistry.*

LISTER AND THE EDINBURGH STUDENTS.—Our contemporary, the "Scotsman," says the "Medical Times and Gazette," relates, apparently in all seriousness, an occurrence in the theatre of the Regius Professor of Clinical Surgery, Edinburg, which could only be fittingly described by a poet. A rumor had got abroad that the Regius Professor was about to be tempted away from Edinburgh by the offer of an honorable post of usefulness and distinction in London. The students of the University naturally were alarmed and grieved at the idea of such a loss to themselves and their Alma Mater; and they presented to the Professor an address, signed by 700 of them, in which, among other things, they declared that the loss would be irreparable—a way of complimenting the man at the expense of the University, which may very well be allowed to enthusiastic young students. Then the Professor replied, and in a strain that could not but charm his pupils and admirers. As he had had no actual offer yet, and therefore it was not easy to say much on the subject, but at least he could say this, that "there existed nothing in London at the present time which he considered good enough to call him away from that school." There was no professional chair so potent for good as the chair of clinicl surgery; but according to the experience of his own student days, and the opinion of every distinguished foreigner who visited their school after the schools of London, as compared with the system in Edinburg, was a mere sham—it was simply neglected and slurred over. And then he went on, after some other words, to this grand climax: "If it were certain that I should have the topmost position in London in private practice, and have to teach clinical surgery as it is taught in any London school at the present time, I would certainly not go to London".—*Am. Md. Weekly.*

VACCINATION IN SWITZERLAND.—The *Echo* says. The strife concerning the utility of compulsory vaccination led some time ago to a general consultation of "all legitimate Swiss Physicians" upon this debated point. A committee was appointed, at the end of last year, to draw up a set of questions, issue them to all the members of the medical profession, and receive their answers. No fewer than 1,376 voting cards were sent out. Each card was divided into three columns headed, respectively "Yes," "No," and "Undecided." At the beginning of the month, 1,168 cards had been returned, each containing the specific suffrage of a qualified practitioner upon each of the questions, accompanied, in some cases, with a good deal of explanatory comment. The questions, which, after much debate, were reduced to five in number, were put in the following form: I. Does your experience incline you to the view that a thoroughly successful vaccination protects the subject against small pox, or at least against the severer forms of it, for a long series of years? To this question, 1,122 doctors replied "Yes," 22 "No," while 24 were "Undecided. II. Would you recommend the vaccination of healthy children? Answers —1,128 "Yes," 25 "No," 15 "Undecided." III. Would you recommend re-vaccination? Answers—1,083 "Yes," 60 "No," 25 "Undecided." IV. Do you consider that inoculation with retro-vaccinated cow-lymph offers such advantage that its use should be striven for? To this, 771 reply "Yes," the "Noes" rise to 213; 184 are "Undecided." V. Are you an advocate for the maintenance of the present compulsory vaccination? 1,010 replied "Yes," 183 "No," and 25 are "Undecided." Some of the answers are merely accompanied by pithy *marginalia*; others take the form of longer or shorter essays upon the whole question.—*British Medical Journal, March* 10, 1877.

Remedies for Chronic Diarrhœa.—Dr. J. K. Spender writes to the *British Medical Journal:*

Medical men are often troubled with cases in which a painless diarrhœa is the leading symptom. It may come and go with the changes of temperature (being specially influenced by dampness of air and decaying vegetation), or it may be the sequel of an acute form of the malady which was never properly cured during the summer. Assuming that most of the common remedies within reach have been tried, and have only partially succeeded, I venture to recommend, firstly, a systematic use of the more powerful vegetable astringents, somewhat as follows: (*a*) A teaspoonful of tincture of galls in an ounce of distilled water, three times a day, is extremely effective, and should be continued at least once daily for some weeks. (*b*) The liquid extract of bael has many merits, and may be given in the same way. (*c*) Salicin should be administered in a dose of five or six grains, perhaps combined with a grain of ipecacuanha. Let them be mixed into a couple of pills, and taken three or four times a day. This plan seldom fails to appease an obstinate diarrhœa. But, secondly, opium is now and then absolutely necessary, and I contend that it should always be prescribed in comparatively small and frequent doses, so as to obtain the least physiological with the most medicinal effect. Let the wine of opium be given to an adult in the quantity of three or fours minims (with an ounce of chloroform water) five or six times in the twenty-four hours, and the remedy ought invariably to be left off by degrees.

THE INCREASE OF NERVOUS DISEASES.—Dr. Althans, in Med. Times and Gaz., London, in answer to the question, "Do the conditions of modern life favor the developement of nervous diseases?" states in an elaborate statistical paper that such is not the case. We cannot answer for England, but feel well assured that in this country nervous affections, particularly paralysis and neuralgias, are far more frequent than they were twenty-five or thirty years ago; a fact which we think is in a large degree attributable to the use of tobacco, coffee, tea and opium.—*Louisville Md. News.*

KEROSENE LAMPS.—The Wiener Medicinische Presse says: "A merchant returned home about two o'clock at night, and found his wife lying on the bed, groaning heavily, and unconscious. She was waiting his return, and at last, tired out, laid herself upon the bed, after turning down the wick of a lighted kerosene lamp as low as possible without extinguishing it. In this position of the wick, if the oil is bad, a vapor mixed with an innumerable quantity of specks of soot diffuses itself through the apartment, and so covers the eyes, nose, and respiratory organs that on falling asleep one runs a risk of suffocation. It is always advisable, therefore, in the use of kerosene lamps to allow the wick to burn brightly or to extinguish it entirely." A physician in Kentucky traced without a doubt his attacks of asthma to the use of kerosene lamps.—*Louisville Md. News.*

STIMULANTS USED BY THE RACE.—It is estimated that coffee, both beans and leaves, are drank by sixty millions of the human family.

Tea of all kinds is used by five hundred millions, and opium by four hundred million; alcohol, in its various forms, by five hundred millions of the human race; tobacco is probably used by seven or eight hundred millions.

These startling facts indicate a large proportion of the race using some substances, that are either stimulants or narotics.

The work of the physiologist, in the future, will be to determine the true place in nature of these substances, and indicate where their use ends, and abuse begins.—*Ex.*

FORCIBLE DILATATION OF THE SPHINCTER ANI IN THE TREATMENT OF HEMORRHOIDS.—Dr. Christofari in his work on this subject comes to the following conclusions:—Contraction of the sphincter ani plays an important role in the production of hemorrhoids. This contraction is much more frequent in hemorrhoidal affection than most writers on the subject think. It produces the constipation and the acute pain which these patients suffer before and after defecation. It exists, too, without pain, and for this should be none the less considered as a cause productive of hemorrhoids. In removing the constriction the physician relieves the painful symptoms which it occasions and at the same time may treat the diseased parts. The best method to employ is that of forcible dilatations. This proceeding, so simple and so harmless, has succeeded in a very great number of cases.—*Gaz. des Hopitaux.*

SOLUTION OF INDIA-RUBBER IN LOCAL TREATMENT OF PSORIASIS.—Mr. Wyndam Cottle has found this material useful in chronic cases of psoriasis, where there is an excessive formation of dry scales, especially in the neighborhood of the joints, where the scales form crusts, are hard, and render the movement of the part painful. The crusts and scales being removed, and the absence of grease insured by wiping the parts with ether, and the skin dried, a solution of the india-rubber is applied with a brush, and the application renewed as often as is needful to maintain a continuous covering over the affected skin. He recommends a solution composed of india-rubber half an ounce, and chloroform eleven and a half ounces.—*Druggists' Circular.*

FISSURE OF THE ANUS.—In place of sudden dilatation or complete incision, Prof. Gosselin, (*Union Med.*, Jan. 16, 1877) combines the methods, in part. He introduces the index finger every day into the anus, until he is able to see the upper part of the fissure. He next incises this, but only dividing about a fourth of the sphincter ani. He then introduces daily a tent smeared with cerate of extract of rhatany. This method has proved very successful in his hands.—*Med. Times and Gaz.*, Jan. 27, 1877.

CHRYSOPHANIC ACID.—This new remedy, of great efficacy in ring-worm, will soon be familiar to our pharmacists. Mr. A. W. Postans, of London, who first prepared it, states that the easiest, simplest, and by far the best method of making it into an ointment is to dissolve the acid in hot fat. Two drachms will dissolve in one ounce of lard, but this is very concentrated. The hot ointment should then be transferred to a mortar, and rubbed down till cold.

If to each ounce of ointment so prepared two drops of otto of roses be added, a most beautiful preparation results, possessing in an eminent degree the active properties of the acid with the delicate and attractive odor of the rose.—*Ex.*

BILLROTH.—A correspondent of the *New York Medical Record* draws this picture of Prof. Billroth: "A profound pathologist, an accurate anatomist, an operator bold to the verge of rashness, an easy conversational lecturer, an accomplished linguist, a good blackboard draughtsman, are qualities not every day to be found combined in one who during the most sever and tedious operations preserves an amiability and unpretentiousness which makes his presence a companionship to the youngest assistant. Nor does one often find the strength and endurance of a blacksmith uniting these qualities on one hand to a distinguished social reputation as a composer and pianist, on the other. A combination of qualities like this in one so favorably circumstanced could hardly fail in achieving the poplarity and success which Professor Billroth has accomplished.—*Louisville Medical News.*

The value of blue glass as a histiological forcer was nowhere better shown than in the case of the man who attempted to cure a wart on his nose by its use. In two weeks' time he was unable to tell which was the nose, and which was the wart.—*Med. News.*

Mr. M. P. LEVYEAU is the authorized canvassing agent for the JOURNAL. All contracts for advertisements made by him will be faithfully carried out by the publisher.

VALUE OF LIFE.—The value of man. Dr. Farr made calculations of the value of man, as a producer from infancy up, that are both curious and interesting.

Basing it upon the agricultural classes of Norfolk, he estimated that an infant at birth was worth twelve dollars and a half, in its prospective labor. Five years later his value as a productive agent was one hundred and thirty dollars, and five years later it was more than doubled. At the age of twenty-five he has attained the maximum value, six hundred and fifteen dollars a year. At fifty it is reduced down to three hundred and forty-five dollars, and so on down to seventy, where the value is only two dollars less than nothing.—*Journal of Inebriety.*

AWARD TO MESSRS. BILLINGS, CLAPP & CO., BOSTON.—The undersigned, having examined the products herein described, respectfully recommend the same to the United States Centennial Commission for Award, for the following reasons, namely:

A VERY fine display of chemicals, *especially* carbolic acid, propylamine [trimethylamine], chloride of propylamine, and also of pharmaceutical chemicals, such as citrates of iron and quinia, citrates of iron and magnese, citrates of bismuth and ammonium, pyrophosphate of iron, bromide of potassium, bromide of ammonium, chromic acid, valerianic acid, and many others. Commended for display and *excellence* of chemicals.

F. A. GENTH.
[Signature of the Judge.]

Approval of Group of Judges.

J. LAWRENCE SMITH,	DR. V. WAGNER.
P. DE WILDE,	CHARLES A. JOY,
E. PATERNO,	J. W. MALLET,
F. KUHLMAN.	

NITRIC ACID FOR HOARSENESS.—Dr. W. Handsell Griffiths says that a few drops of nitric acid in a glass of sweetened water, a couple of times daily, will be found an excellent remedy for the hoarseness of singers.—*Richmond and Louisville Medical Journal.*

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Original Communications.

SULPHATE OF CINCHONIDIA AND SULPHATE OF QUININE.

BY WM. ABRAM LOVE, M.D.
Professor of Physiology in the Atlanta Medical College, etc., etc., etc.

To write an article on the subject of *sulphate of quinine* at this day and time, would seem to be a work of supererogation—especially in a section of country where that drug has so generally taken its place among ordinary household supplies—unless that article should be directed *against* its inordinate, indiscriminate and injudicious use. In the hands of the profession, who have studied its physiological action, and the pathological conditions against which that action may be directed, it is one of the most valuable and potent remedies of the materia medica. But unfortunately from these very facts, it has passed into the hands of the laity who have not studied these things, and this most valuable remedy, from its abuse and injudicious use, has in an indirect way resulted in much evil to those who have with too much faith, leaned upon it as a remedy in this mal-application. Yet the abuse of an article is no argument against its judicious use. This abuse in certain sections of the country has been in its administration as an anti-periodic and prophylactic, in controlling or preventing the development of miasmatic disease—in its use without the proper elimination from the system of such dead elements as have been disintegrated in the organism while the emunctories have remained closed, preventing their exudation or a failure of action entire or in part, on the part of the glands and secreting membranes. Serious consequences follow this neglect, not from the use, but this abuse of the remedy—not that it fails of its legitimate action, but because too much is expected from its administration.

All is conceded that is claimed for it as a tonic, as an anti-periodic, as a supersedent and a sedative, (cardiac or otherwise,) as well as much that is claimed for its prophylactic powers—yet we are told that it fails in many cases to come up to the expectations of those who give, or those who take it, or both. These failures may, as a general rule be traced to the errors alluded to above, while in many cases they may be clearly attributable to error in the *time* of its administration. Particularly is this the case in intermittent, remittent and continued fevers. We had been instructed to administer the drug at stated intervals immediately preceding the expected paroxysm in intermittent diseases—on the wane of the fever in remittents, and at stated periods if at all in continued forms of fever.

After all that has been claimed for quinine is conceded—there is another still, of which we hear but little—and that is its power of regulating the disturbance in the *normal* diurnal changes that take place in the system, under miasmatic and other paroxysmal diseases. The normal diurnal changes are, two greater and two lesser, with still four other, less marked, yet fixed as to time. They occur in health—are physiological. The two greater changes take place at midnight and at noonday. The two lesser at six o'clock morning and afternoon, and the other four, less marked, about midway, between these four, but may predominate to the one or the other side according to the condition of the system or the circumstances attendant upon each and every individual case. Now there is little hazarded in making the assertion that the potency of quinine depends—in all forms of disease diurnally paroxysmal where it is at all admissible—upon its power of regulating the disturbances that take place in these diurnal changes, from the greatest to the smallest, and with equal confidence it may be stated that it is most effectively shown, when the remedy is administered between the changes that take place at midnight, and the early or later morning change (i. e.) between one and ten o'clock A. M.

It is not intended to do more in this paper than to point to these changes, and to the fact of the more effective action of quinine when administered between the hours stated. If a patient will bear it at all, with benefit, that benefit will be enhanced by taking advantage of this fact. Where the fever is continuous, and seemingly so high as to contra-indicate its use—the remedy will frequently through its antipyretic action reduce the temperature very much, and very certainly more than when given at any other period of the twenty-four hours. Any physician may at any time satisfy himself of this fact, by fair trial at the bedside, thermometer in hand, noting the diurnal thermal curves, and take advantage of the same, in the treatment of any form of disease when the free use of quinine is indicated. By resorting to this period for its administration, it will be found too, that a far less quantity of the drug will be required to produce the same satisfactory results.

What is said here of quinine, may, with equal confidence be said of the other alkaloid or its salt, now presented to the profession—

THE SULPHATE OF CINCHONIDIA.

As to the difference in effect of the two remedies, administered in like cases, this will not be generally of a marked character. To some few points of difference it may not be out of place to refer, and in these there would seem to be some in favor of the cinchonidia. In the manifestations of its action upon the nervous system, they are less marked upon the nerves of special sense, than those resulting from the use of quinine. There is less cerebral fullness, less ringing in the ears, less deafness and disturbance of vision, or vertigo.

In some individuals quinine has a tendency to produce muscular prostration, coldness of the surface, and in herculean doses, prostration and collapse. In this class of cases, in known individuals, where both have been tried, it has not been our province to mark any special difference between the action of the quinine and the cinchonidia. As a cardiac sedative their effects are about the same. During a practice of very many years within the malarial belt, where miasmatic diseases in all their forms and complications presented themselves, from a simple chill and fever to the most aggravated form of hæmorrhagic malarial fever—(hæmaturia) and miasmatic purpurea hæmorrhagica, we found that when the disease was disposed to run into a chronic form, or a condition of *malarial cachexia*, quinine was not so effective in its action, not so certain or reliable as to results as the preparations of bark containing other or all of the alkaloids, (i. e.) the solid extract—fluid extracts, tinctures, or even the powdered bark itself. In such cases the *cinchonidia*, it is believed, would be a more effective remedy than the *quinine.*

Our work has been confined more particularly to the treatment of delicate females, many of them from the malarial belts of this and the adjoining States, who reach us with their systems surcharged with malaria, their vital forces depressed, their secretions deranged, their powers of assimilation and disintegration below par, their portal system passively engorged and their nervous system very much impaired. In such cases we have found the cinchonidia, as we believe, more effective than the quinine, certainly more satisfactory to the patient from its affecting less the nerves of special sense, alluded to above. In such cases, where intermittents are disposed to assume a masqued form, cropping out under the guise of *neuralgia, myalgia* or *rheumatism, etc.*—where a certain periodicity becomes observable in the train of nervous symptoms that complicate or accompany uterine diseases, the cinchonidia will present some advantages over the quinine—first, for the reasons assigned above, its tendency to produce less disturbance in the nerves of special sense—and for the additional reason, that while its action may be somewhat less rapid than quinine, it is to the same degree more persistent and permanent in its effects. Every practitioner who closely watches the effects of his remedies, has learned by experience, that all alkaloids act more rapidly than the agents from which they are obtained—they act *explosively*, so to speak, there is a *tension* in their action that is quick but short lived as compared with the agent from which they are derived. In the treatment of acute cases and in cases where an *emergent* action is desired, this gives them—the alkaloids and their salts—great advantage over the original substance. But in a very large class of cases, where disease has assumed a chronic form, where it is persistent or recurrent, where there is a tendency to run into the condition of a *cachexia*, we find the parent substance more effective than its more active alkaloid. We desire an action that is nearer allied to the slower process of *combustion*, rather than that of *explosion*. In such cases we resort to the original substance, to its solid extract or to some form *nearer approaching* the original in its action, rather than the alkaloid or its salts. Now as we approach the one or the other of these extremes in the form of the agent, we modify or intensify its action, but while its *tension*, its *concentrated force*, and so to speak, *explosive action*, rests in the alkaloids and their salts, it loses *pari-passu*, its *persistence*, and inasmuch as "strength does not consist in spasms, but in the stout bearing of burthens," we have occasion to recede a little from these more active preparations and their explosive, or so to speak, *spasmodic* action, and trust to the stouter burthen bearing powers of the preparations of nearer approach to the original mother agent.

Just at this point we feel that *Messrs. Powers & Weightman, Manufacturing Chemists*, have, as we stated before our State Medical Association last week, placed the profession and the people under lasting obligations to them, by furnishing an agent with which to fill one such gap—and a very important one—in our materia medica, in presenting to the profession sulphate of cinchonidia as a substitute for sulplate of quinine—an agent filling a gap just a degree below the *tensive* action of quinine—but at the same time more persistent in its ultimate effects.

For over twenty years of our professional life, it has been our province to battle against the effects of malaria, in its most concentrated virulent form, within the malarial belts of this State, and we have constantly during that period and since, felt the need of some stout burthen bearing anti-periodic malarial antidote, without the *explosive*, *tensive* action of quinine. Though no longer of that malarial region we bear a *feeling* recollection of its *impresses*, and while we are now in the higher altitude on the water shed dividing the waters of the Atlantic and the Gulf Streams—(Atlanta is situated in 33° 45' 19.8" Lat., 84° 23' 29.7" Long.—at an elevation of 1,087 ft. above the level of the sea), where malaria is, comparatively speaking, scarcely known—yet from the nature of our professional labor, we have had ample opportunity to test the effects of the drug on cases (principally delicate females), coming from these malarial belts or like regions of Georgia, Alabama, Florida and South Carolina, where their systems had for months, and perhaps years, been constantly saturated with the subtle poison. In such cases we have found an advantage in the more persistent action of cinchonidia, in its less tendency to affect the nerves of special senses, in the less sense of *tension* of the brain and nervous system, hence a better tolerance of its use—nor does it seem to produce the same amount of gastro-intestinal disturbance. In view of all these thing we can readily account for the fewer relapses that follow its judicious and sufficient use.

It is admitted that a change of air and change of altitude will and does aid in the restoration of those who come here from malarial regions for treatment of diseases and derangements peculiar to themselves or their sex, rather than their section. Yet they often reach us charged with malaria to such an extent that it would require long residence to eradicate the same without the aid of remedies to correct the existing morbid associations and mal-action in their organisms. Aside from their peculiar diseases or derangements, they bring with them the same *pathological conditions*, resulting from *miasmatic* influences that existed with them at home, subject to the same laws, amenable to the same remedial agents. Such cases yield to the cinchonidia treatment in this respect, here, and a continuance of the same after their return home has so far given token of a like happy result, so that all the benefits in this respect cannot be attributable to the health giving air of this *Kennesaw Range* of mountains.

We have observed the same rules with regard to the use of cinchonidia that have so long governed us in the use of quinine. We have given it in the same doses, forms and formulæ, and for the reasons given above, while in some few active and acute cases, where the active, tensive, explosive action of quinine would, to meet an emergency, or parry a paroxysm, seem to point to that as the preferable agent, still in the vast majority of cases where we are accustomed to regard quinine as indicated in the treatment, in which these exigencies do not exist, where the disease is chronic or the impress persistent, where the indications are for a *siege* treatment rather than *by storm*, we are pursuaded that an advantage other than *pecuniary* will be found in the use of SULPHATE OF CINCHONIDIA.

ADULTERATED MEDICINE.

BY DR. J. S. PEMBERTON, ATLANTA, GA.

We have many extraordinary accounts of the falsification of drugs and medicines, vouched for by parties best qualified to know. Instances of vile adulterations meet us every day, and it is not to be denied that there is a growing demand by a large class of dealers in drugs and medicines for cheap articles, without regard to *quality*. In England they seek to improve the quality of all remedial agents, regardless of *cost;* in this country we seek to cheapen the price of remedies regardless of quality. It is curious to compare the prices current as issued by the manufacturers and dealers in drugs and medicines, the prices varying from twice to three times as much on one list as another. The true reason and explanation of this is undoubtedly that some manufacturers and dealers make and sell preparations of full strength and known purity, while others ignore the standards of the Pharmacopœia, and sell preparations of such strength and sophisticated quality as suits themselves. We will not ask whether this is justifiable on the professional ethics, but we put it to the profession, whether it is dealing justly towards that very large class of purchasers, who are led by names, with very little knowledge as to the real merits of the preparation. Pure remedies cannot be sold for the same prices as impure ones. Those who offer medicines at reduced prices make their profits by adding often worthless articles that chemically change the action and power of remedies to such an extent that disappointment must necessarily follow their exhibition. The character of the manufacturer and dealer must secure character for his preparations. The profession should obtain a more critical knowledge of the various manufacturers and dealers, that due weight may be given to the names associated with the medicines they use, and should be careful to observe that the authenticated label of the manufacturer or druggist is affixed. The dishonest manufacturer or druggist, no less than the itinerant doctor, the quack or charlatan is an imposter, and by a system of false assurances, often obtain possession of the business which legitimately and humanely belongs to the man of science and honest purposes. The price of medicines should be a minor consideration with the physician. His aim should be to obtain pure drugs, and such cannot be obtained at the low prices quoted by some manufacturers and druggists, as the crude articles themselves actually cost more than the preparations do after they have passed through the manipulations and processes of the laboratory. Yet it is not unfrequently the case that physicians are influenced too much in their decision in favor of cheap articles, forgetting that they may not only be entirely worthless, but that the effects of the uncertainty and bad quality of these substances are transmitted directly to the practice of medicine, and in failing to fulfill the indications for their use, they not only bring distrust and discredit upon both the science and art of medicine, but also tend directly to foster and uphold the quackeries and nostrums of the day in many ways; forgetting too that perhaps one-fourth the quantity of the best preparation would answer their purpose, at a less actual cost, and at the same time would promote their reputation for success and skill. Many are the adulterations, in every conceivable manner, of remedial agents upon which the success and reputation of physicians and the life of patients depend.

The following is given as a sample of the many hundreds of articles reported, of vile adulterations. Dealers of apparent respectable standing are extensively engaged in manufacturing and selling fluid extracts, chemicals, essential oils and powdered drugs, rendering them of an entire worthless nature by adulterations. Many of the leading articles, such as sulp. quinine, ipecac., chloroform, balsam copaiba, spirits of nitre, iodide potassium, rheubarb, cream tartar, olive oil, glycerine, etc., are sold at a lower price than the crude material is worth in market. Original packages of essential oils are opened and contents adulterated and then resealed. Iodide potasium is adulterated with bromide, quinine often mixed with salacin and sulphate cinchonidia. Cream tartar is put up with tartaric acid and terra alba, regardless of the true preparation of bitartrate potas. Balsam copaiba is adulterated with linseed and other oils; spirit nitre mixed with water; glycerine reduced one-half with water; olive oil adulterated with cotton seed oil; fluid extracts are made and sold scarcely stronger than tinctures. In fact, there seems to be no limit to the villainous adulteration.

The special attention of physicians is called to the fact, and they should remember that on the purity of medicines depends numerous and important issues, such as affect his success and reputation, the interest of the sick, the mitigation and cure of diseases, the hope and expectation of anxious friends, and even in many instances, life itself. Every agent used for the mitigation or cure of disease should be given free from any adulteration. Much of a physician's success of obtaining and retaining a practice must necessarily depend upon the purity of the agents he employs. The effects of impure drugs are not limited to the physician and his confiding patient, or even his patient's friends. Communities have a great interest at stake, and the circumstances may be such that the doctor may have a public verdict against him, and his reputation, however good, however meritorious, and however hard-earned, destroyed simply by the administration of adulterated medicines. There are other issues pending, such as protracted disease and increased suffering and the loss of life, plainly to be attributed to the use of spurious medicine.

The laws of our country are framed for the punishment of frauds and its suppression, but no law has yet been passed adequate to suppress the alarming and increasing fraud—the adulteration of medicines. A counterfeit currency has laws for its prohibition, and punishment of the offending party, but alas! this is not the case with spurious drugs. And yet the man who stands convicted of making and passing counterfeit money has not committed a crime that should be mentioned in relation to its guilt and moral turpitude as contrasted with that of manufacturing and vending impure medicines. The former has aimed only to defraud in money; the latter not only takes your money, but protracts your sufferings that finally end in death. As health constitutes the crowning blessing of life, without which wealth, applause, and fame sink into absolute insignificance, so that deception which aims directly or indirectly at the citadel of health, may be in all truth said to constitute the *ne plus ultra* of fraudulent transactions, and ought to merit a general rebuke and condemnation by conscientious dealers and physicians.

Now, what is the remedy for this great evil? It is in a more liberal education and the cultivation of a higher standard of honor amongst dealers and manufacturers, and a more liberal spirit on the part of physicians in regard to prices. Let it be understood that we do not object to anyone buying things cheaply; this is in many cases the secret of success. The best remedy, to our mind, in correcting such an alarming evil, lies in a higher, broader, and more liberal education; in a close examination and scrutiny of all articles used for medical purposes, both by the druggist and physician—examinations by reagents, by physical characteristics, by the microscope, of all articles bought and offered for sale. No druggist should, and no thorough pharmaceutist will, ever place an article in his stock without a critical examination; and when adulterations are found, to condemn and report the fact through the journals should be his bounden duty.

More anon on this subject.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

J. S. TODD. M.D., REPORTER.

ATLANTA, March 27, 1877.

The President, Dr. V. H. Taliaferro, in the chair.

Dr. Bragg called attention to a peculiar condition of the penis, in a patient on whom he had recently operated. He had noticed this state of that body several times, and always in the negro. The peculiarity alluded to was the bone-like feel of the penis, which came on before the introduction of the dilating instrument. The penis was not erected, but felt hard. It offered no impediment to the introduction of instrument.

Dr. J. G. Westmoreland spoke of the local action of carbolic acid, and said while, according to his observation, it benumbs the sensibility of the skin, it is less painful when applied concentrated than in two grain solutions to the ounce of water; said application being made to an inflamed part. He did not understand the philosophy of this peculiar action, and could only compare it to the difference in sensation occasioned by the effects of a white hot and moderately heated iron; for while the former causes more complete and deeper destruction of tissue, the latter, though not occasioning so extensive a destruction, is much the more painful. He has applied to the buccal mucous membrane and fauces in the same case the pure acid, with less pain than when it was diluted. This phenomenon he noticed in a case of diphtheria, where the deposit was not so extensive as to shield the entire surface. It does not, when applied pure, cause an eschar or destroy tissue. It is not escharotic, and when placed in contact with mucous membrane which is inflamed, there is left a white film or coagulum, which in a few hours comes off, leaving a paler, less inflamed surface than before its use. It will produce less pain and destruction of tissue than the solid stick of nitrate of silver. It cannot influence the sensation of parts below the skin, and is consequently, as a local anæsthetic, limited in its action.

Dr. Baird said he could not understand the philosophy of Dr. Westmoreland's position, and was persuaded that the analogy or parallel that he attempted to institute between the white hot iron and concentrated acid was entirely destroyed by Dr. W.'s assertion that carbolic acid was not escharotic; for the white hot iron caused less pain than one not so highly heated, by the instantaneous destruction which was consequent upon its application; but if carbolic acid was not escharotic, there the simile ended. He had not been so hardy as to test its strength unless diluted, and that too very largely—two grains to the ounce—and it occasioned severe pain. He thinks Dr. Westmorelend entirely mistaken, and cannot subscribe to his views.

Dr. Westmoreland said he knew the analogy between the hot iron and the concentrated acid was not as complete as he would wish, and did not mean to say that it was by any means perfect, but if Dr. Baird had had no personal experience, he was not a competent witness.

Dr. Simpson: A dilute solution does not give pain when applied to the skin under the clothing, but concentrated it destroys the epidermis. This he knew from practical experience on himself.

Dr. Westmoreland said there was considerable difference between inflamed mucous membrane and healthy cuticle. His remarks applied to the former membrane. Incredulous members would have their doubts dispelled by testing for themselves.

Dr. Logan: The very shock which the concentrated acid would occasion on application might, he thought, in the event there was much local disturbance at the time, cause less pain than a dilute solution. He had only used it in full strength to the non-sensitive os uteri.

Dr. Baird said he had applied a two grains solution to an ulcerated breast, the extent of ulceration being large. Would Dr. W. advise the concentrated acid to this surface, and did he mean to say that it would occasion less pain at the time of applying and subsequently?

Dr. Westmoreland: Yes, the pain would be less.

Dr. Todd said, according to Dr. Bell, of the army, who has written the most elaborate and sensible article on carbolic acid he had read, one of its greatest virtues was its power of diminishing the pain in cancer, administered internally. In two of his cases he had tested this alleged virtue with complete satisfaction. It is locally anæsthetic, and will obtund sensibility to such an extent that boils might be opened, and the amputation of the fingers and toes may be done without pain after a concentrated solution has been applied.

Dr. Bragg said that a weak injection of the acid in gonorrhœa causes little or no pain; when applied pure to a cancerous surface it gave intense pain.

Dr. Elbrey: In chancroid ulcerations of the penis, the pain on application of pure acid was of the intensest character. In five per cent. solutions he had heard no complaints. Regards it as an escharotic. He had obtained no satisfactory results from it as an injection in clap. Locally it was anæsthetic, and he had used it satisfactorily after the manner of Dr. Bell, to open buboes, etc.

Dr. W. F. Westmoreland said carbolic acid would obtund cutaneous sensibility so completely as to permit minor operations. He had been in the habit of commencing with one part of acid to twenty of water, gradually increased to one-half the full strength. He commences with a weak solution because pure acid would cause intense pain applied to the skin or elsewhere. It will destroy sensibility of tissue to considerable depth. Dr. Doughty, of Augusta, had produced dry gangrene by its use on the finger.

Dr. Taliaferro had abandoned its use to the uterine mucous membrane, because of its escharotic effect; for he had known it to occasion in some cases stenosis of that organ.

Dr. Logan had under his care a case of scarlet fever, about the diagnosis of which he entertained no doubt; and had the week previously a well marked case of diphtheria.

Dr. Elbrey had also had, in a child at the barracks, an undoubted case of the latter affection. He called attention to Dr. Stewart's treatment by sulphuric acid. Dr. S. claimed that it was a specific when given with quinine, and the tincture of iron was used locally. In this case he was pleased with the results, but did not use the iron. Four drops of the aromatic sulphuric acid and one grain quinine were given four times a day. He did not know Dr. S.'s philosophy of the *modus operandi*.

Dr. W. F. Westmoreland: Diphtheria is supposed to have its origin in bacterial germs, and sulphuric acid was found to be most poisonous, or the most effective agent that could be used for their destruction.

Dr. Todd suggested that Dr. Westmoreland was mistaken, and that *sulphurous* acid was the agent that he alluded to.

Dr. J. G. Westmoreland agreed with Dr. Todd, but had no faith in this supposed origin or cause of diphtheria.

Dr. Logan places most reliance in quinine in treating diphtheria; he also gives chlorate potassa internally. Has ceased to meddle with the exudation, and thinks local applications that are caustic or irritating positively injurious.

Academy adjourned.

O. R. FORD, M.D., REPORTER.

ATLANTA, April 3, 1877.

The President, Dr. Taliaferro, presiding.

Dr. F. King, the regular essayist of the evening, presented an essay, as previously announced, on syphilis. He declared his intention of wandering from the beaten track in the presentation of the subject, and invited the criticism of the Academy. He cited cases from the scriptures in support of its ancient origin, and asserted that the intercourse between the different nations of the earth kept the disease alive and augmented its violence by supplying fresh material for its ravages. Chancre, or syphilis, and chancroid are one and the same disease, produced by the same poison, and only varying in the amount and virulence of the poison absorbed. He treats the local sore with lunar caustic. He considers hygiene as one among the most important features in connection with the successful treatment of syphilis. The functions of the skin, kidneys, bowels, etc., should be carefully attended to, as these are the avenues through which nature attempts to expel her enemies.

He is not in favor of using mercury; thinks that the disease can be treated more successfully by the use of other less objectionable remedies. In all stages of the disease he employs iodide potassium in connection with vegetable alteratives. He gave a prescription which contained an alterative, tonic, diuretic, and aperient, which he thought adequate to expel the syphilitic virus from the system. He thinks the treatment should be kept up for at least eighteen months, and always advises his patients to continue it for two years, changing the prescription from time to time so as to meet the pathological indications.

Dr. J. G. Westmoreland said, if he understood Dr. King's essay, he did not agree with him as regards the different stages of syphilis. The primary stage includes the chancre and induration of the neighboring lymphatic glands. The secondary symptoms are confined to the skin and mucous membranes in the form of syphilitic eruptions, mucus patches, sore throat, etc. The tertiary symptoms may occur years afterwards, which consists in changes which take place in the bones, nerves, etc.

Dr. King claims that when the chancre appears the disease is then constitutional and in the secondary stage.

Dr. Baird said that Dr. King had presented an old subject in his essay in a novel and original manner, and, as anticipated by the writer, many of his views would not receive the concurrence of the Academy. He denied that the presence of syphilis always implied immorality on the part of the subject, for it is frequently hereditary, and virtuous wives are often infected by faithless husbands. He thought some of the scriptural quotations misapplied, and that some of the cases brought forward to prove the ancient existence of syphilis were not syphilis at all—the prominent symptoms of the disease being wanting. As to the identity of the two diseases—chancroid and syphilis, as claimed by the writer—the difference being one of degree only, he had but little to say. Every one is familiar with the characteristics of the chancre and chancroid. It is difficult to understand how any one who has observed the healing of a simple chancroidal ulcer, with no consecutive symptoms of disorder, can believe that it is identical in kind with syphilis. He asserted that the anatomical and physiological peculiarities of the different races were not the important factors in the propagation and increased virulence of this disease that the essayist claimed. Syphilis is curable. As to the treatment of the two affections, he prefers in chancroid the application of nitric acid or nitrate of silver, as being less painful and more efficient. In syphilis thinks mercury is the remedy in the early stages. Later, iodide of potassium is preferable. Believes the subjects of syphilis are less susceptible to the effects of either of these remedies than persons in health. Thinks five grains of the iodide totally inadequate. It should be given, in adults, from twenty, gradually increased to forty or more grains, three times a day. Referred in this connection to a case recently treated as above. The patient—a girl aged about 16 years—was the subject of hereditary syphilis, which exhibited itself in a large gummy tumor in the popliteal space on the right leg, and a smaller one above the knee on the left leg. The skin, for many inches in circumference, presented an angry and dusky red appearance, with swollen veins and watery discharge from abraded points on the surface. When one hundred and twenty grains a day was reached, all the symptoms disappeared, as if by magic, and the general condition and appearance of the girl was greatly improved. The remedy should be continued in such cases from six to twelve months, intermittently administered. Its too early suspension is the cause of frequent relapses, and the opinion of some that syphilis is incurable.

Dr. H. L. Wilson inquired if catarrhal symptoms did not result from such large doses.

Dr. Baird replied that persons were occasionally met with who did not tolerate the remedy. Such cases he thought were rare, and due to some idiosyncrasy.

Dr. Connally asked if the patient of whom Dr. Baird spoke had no symptoms of syphilis prior to the sixteenth year.

Dr. Baird: There was no previous history of syphilis, but she appeared sallow and pasty, as if suffering from some cachexia.

Dr. Connally said, in his opinion, if the tumor was of syphilitic origin, some evidence of the disease would have appeared in early life, and questioned the accuracy of the diagnosis.

Dr. Calhoun did not concur with the views expressed by Dr. Connally, and related a case corroborating Dr. Baird's opinion, in which the symptoms of syphilis appeared forty years after exposure. Thinks persons who cannot tolerate even small doses of iodide of potassium are not infrequently met with, and in whom it produces loss of appetite, moroseness, low spirits, and irritable temper, in addition to catarrh and a cutaneous eruption; but he believes that the full beneficial effect of the remedy can only be obtained by large doses, from twenty, forty, sixty, or even ninety grains,' three times a day. Thinks some means of counteracting the unpleasant effects of the iodide would be a great gain.

Dr. Baird advised its administration in connection with a tonic; usually employs compound tincture of gentian. It should be given after eating, and largely diluted.

Dr. Todd does not believe that syphilis lies dormant in the system for forty years. If it is present it will show itself earlier. Iodide of potassium in five to ten grain doses does as much good as larger doses. It is only an adjunct at best. Mercury, in his opinion, is the remedy for syphilis, and is superior to any other remedy in all stages.

Dr. Baird was not surprised at Dr. Todd's low estimate of iodide of potassium, as he gave it only in five-grain doses.

Dr. H. L. Wilson agreed with Dr. Calhoun, and reported a case in which the disease was latent for forty years. Has known patients to take small doses of the iodide of potassium with no effect, when the symptoms subsided upon an increase of the quantity.

Dr. Taliaferro referred to the variable susceptibility of different persons to the iodide, and was satisfied that a remarkable tolerance of the remedy existed in most syphilitic patients. Believes that when the peculiar effects—catarrh, eruption, etc. —are produced by small doses, that the same benefit is obtained that follows the administration of large doses to less susceptible persons. He related a case—a young man, the subject of syphilis, who reported his inability, after repeated trials, to take even small doses of the iodide. He, notwithstanding this fact, prescribed one grain three times a day, but the effect was so unpleasant that he was forced to discontinue it, but resumed again in doses of one-quarter of a grain three times daily, gradually increased to ten grains at each dose, without any unpleasant complications, and relief of the syphilitic symptoms. He thinks the biliary secretion is interfered with by the iodide, and he is in the habit of combining it with stillingia, for the purpose of exciting the function of the liver.

Dr. Calhoun reported a case of ptosis, on which he had operated some twelve months ago. The patient was a young lady, aged 22. Several years previous to the operation the upper lid of the right eye began to droop, followed, in a short time, by the same action in the left upper lid, which continued until both lids had almost covered the pupils of the respective eyes, thereby obstructing vision. In crder to see, it was necessary for the patient to throw her head somewhat backwards, and at the same time to look down, as by this action the pupils were uncovered. An elliptical incision was made in both lids in their entire length, and that portion of skin and cellular tissue in the incision was removed. From the right lid, in addition to the skin and cellular tissue, a corresponding piece of the fibres of the palpebral portion of the orbicularis muscle was removed. The wound was brought together by stitches, preserving the former size of the lids. In the right lid, the stitches extended also through and caught up the cut edges of the orbicularis fibres, thus bringing them in contact. The result was very satisfactory. It healed by first intention, leaving an almost imperceptible cicatrix. Both the power of opening and closing the lids was restored, and the cure is now complete.

J. S. TODD, M.D., REPORTER.

ATLANTA, April 10, 1877.

Dr. A. W. Calhoun, Vice-President, in the chair.

Dr. J. G. Westmoreland called the attention of members to several cases of his which had roseola in conjunction with pharyngitis, and also intimately associated with rubeola. To have sore throat as an associate or complication of roseola was to him rare. The measle cases had bronchial symptoms, were true measles, but no throat trouble. His object in mentioning the cases was because the week before some members had reported scarlatina, and as his cases of roseola were all attended with a sore throat, and their's slight, he was inclined to believe that there may have been an error in diagnosis, based on a casual examination, and the infrequency of pharyngeal trouble with roseola.

Dr. Rauschenberg: Botanists and dermatologists frequently split hairs. Kindred species of the same plants and cutaneous affections are assigned different, widely different names, while really, for all practical purposes, they are the same. He treats diseases, not the names with which specialists have seen fit to dignify different phases of identically the same malady. Is never certain as to names, but can tell roseola from variola or scarlatina, and *vice versa*.

Dr. Calhoun asked Dr. R. what he understood roseola to be.

Dr. Rauschenberg thought it stood between measles and scarlatina.

Dr. J. G. Westmoreland said that the eruption of roseola is distinct and easily recognised from either or any other skin affection. The connection of unmistakable roseola with the pharynx was the special point of interest to which he wished to call the attention of members. The eruption of roeola was miliary or papular, giving to the touch a feeling as if the skin had sand in it—fine sand—while that of measles is rougher and more elevated in the arrangement, and that of scarlatina shows a flush with smooth surface. These were, of course, the wide differences which any close observer would not fail to recognise.

Dr. Baird had had a case of roseola where the roughness spoken of by Dr. Westmoreland was so great that it amounted to cutis anserina.

Dr. Rauschenberg asked if it first appeared on the upper extremities, and had then gradually covered the body. Had a case recently which showed the eruption on all the body except the face, and complicated with catarrh. The patient was well only the night before; therefore he thought it was roseola. It was well in a day or two. He now called it a simple rash, or erithema.

Dr. Calhoun reported a case which illustrates the power of the tympanum to reproduce itself, and also the potency of medicines, occasionally, in that very troublesome affection, follicular pharyngitis. A gentleman from the Northwest, who had been spending some time in Florida on account of tubercular disease, fell under his care, and who, upon examination of the ear, was found to have lost two-thirds of the membrana tympani of the right ear, and one-half of that membrane in the left ear, which were still inflamed, and from which there was a free discharge of pus. For the affection of drums he prescribed:

℞.—Acid Carbolic, ...	gr. j.
Acid Salicylic, ...	gr. x.
Glycerine,	
Alcohol, aa.	℥ss.

M. sig.

After syringing with luke-warm water the ear, pour in a few drops of the solution.

In a short time this opening or destruction of drum in the right ear has been literally bridged ever. There are between the bands of reproduced tissue two small openings, which are conservative, serving as vents for the escape of pus, of which a small quantity is still secreted and discharged. This improvement had taken place within a week or ten days. There has been no reproduction of membrane in left ear. His hearing before treatment was so much impaired that he only distinguished the tick of a watch in contact with the ear. Now he hears it at three or four inches, with the drum inflated. The follicular pharyngitis yielded rapidly to the inhalation of the fumes of spt. terebinth. It is his practice to give the turpentine in boiling water—say a drachm of the spirit is poured into a half pint of water heated to the boiling point, and the patient is directed to breathe the fumes or vapor that comes off. The effect of breathing the vapor is quite unpleasant at first, causing irritation of the pharynx, constriction of the chest, etc.

Iron, quinine, and strychnia were also given. The disease of ear was of twelve months' standing when it came under his care, and he thinks it was caused by extension along the eustachian tube from the throat.

Academy adjourned.

ATLANTA, GA., April 24, 1877.

The President, Dr. V. H. Taliaferro, in the chair.

Dr. Armstrong was very positive in his belief that the opium habit could, in the large majority of instances be entirely broken up, and that, too, in a short time and with little or no suffering to the patient. It would seem said he, that the medical profession as a class, either considered the habit incurable or gave it little attention, from the number of alleged advertised cures with which the daily press teem, and the extensive patronage that rewards the quack. He thought it the duty of physicians to enlighten their patients, give them hope; for much depends on the mind, especially in treating this class of unfortunates, who have been led to believe that the habit will only cease with life. We can give them positive assurances—the only condition being their full co-operation—of speedy and certain relief from this habit, which renders their life dreary, melancholy, hopeless, useless, miserable. The consequnces if opium is suddenly and entirely withdrawn would be serious—he fears where the habit is of long standing fatal. It is expecting more than human resolution can accomplish, to attempt to cure by that plan. His method is to find out the daily quantity that is consumed, and the dose and time of taking. This ascertained, he writes a prescription so that each drachm of the solution—water being the vehicle—shall contain the usual portion, which is to be given at the same hours as was customary. From another bottle of solution of quinine, each dram containing from jss. to ij grs., every time a dose of the morphia is taken out, an equal quantity is added to the morphine bottle. In this simple manner of gradual reduction, he succeeded recently in curing a patient who had been in the habit of taking morphia for twelve months, and whose daily average at the beginning of treatment was from jss. to ij grs., in about twenty days. One year ago he cured a man by same method in six weeks, whose daily allowance was grs. xv. of morphia. To this patient for anæmia he also gave iron. He is now satisfied that in this instance the time was too short; he should have taken two months at least, as there was intense suffering for a few days after the medicine was exhausted. Has never used strychnia, but is satisfied that at least one of the opium antidotes contains that drug. He sees no objection to its use, but has gotten on so well with quinine, he has had no occasion to use it.

Dr. W. F. Wastmoreland said we did not encourage our patients enough to even get them to consult us as frequently as they would if our conduct towards them was different. We tell them the way, and the only way to break the habit is to quit, and the result is the applicant does quit us, and becomes the prey of merciless, unprincipled charlatans, whose antidote is as impossible to leave off as the poison which it is given to painlessly counteract. Thinks it would be dangerous to leave off suddenly. He has cured four cases by the plan mentioned by Dr. Armstrong. He gives also tonics of iron, gentian, strychnine, etc. One of the cases alluded to took a drachm of morphia daily, and a large quantity of whisky with it, which caused delirium tremens. He was incredulous as to the amount, but found that nothing less than 15 gr. doses would affect him. In six weeks he reduced to ijss. grs. daily. The second case took during the twenty-four hours xx. grs. of morphia daily. In four weeks ij. grs., in six, j. gr., then left off altogether. He suffered from nausea and nervousness, and in seven days left for his home, having gone that long without any at all. The third case, taking 8 grs. daily of morphia, was cured in two or three months, and suffered but little until the quantity was only ½ gr. daily, and then dropped entirely, which caused diarrhœa, nausea, vomiting, and much pain, which symptoms were treated with antispasmodics, which contained no opium, ginger, whisky, etc. The fourth case was cured in three or four months, the quantity being iv. grs. daily. The mind has so much to do with it that he thinks it would be well to lead your patients to believe that they are taking an antidote, for this idea has an exhilerating effect that tends very much to insure your success. Does not regard quinine as in any sense antidotal.

Dr. H. L. Wilson said at one time it became necessary from severe suffering for him to continue the use of morphia for forty days, and it took finally ij. grs. daily to relieve him. He did finally, by the method spoken of conquer the habit, but he knew by bitter personal experience that it was not such an easy matter as the observation of those members, who did not undergo the ordeal themselves would indicate. Whisky he was satisfied would not fill the place.

Dr. V. H. Taliaferro acquiesed in the views of Drs. A. and W., and also with Dr. Wilson, for he had never cured without pain. But his reduction was more rapid than theirs. In two cases the suffering and collapse alarmed him.

Dr. W. F. Westmoreland had been called to a case of retention of urine, which condition had existed for forty-eight hours, and was the result of a stricture of the urethra of such small calibre that no instrument except a filiform could be introduced. For three or four months he had not emptied the bladder completely. He found the patient in extremis, bathed in a cold perspiration, pulse 150, great relaxation, etc. Which operation, puncture of the bladder or perineal section should be performed, was a question which gave him solicitude in deciding; for the former would only give temporary relief, and on the other hand could the patient bear the shock of the latter? After carefully weighing the subject, he decided to do the perineal section. The patient was given chloroform, for he is sure that ether increases the shock. He cut in to the membranous portion of the urethra, which incision was followed by a free discharge of urine and pus. The operation was here suspended, as from this opening a catheter can be introduced. It was forty-eight hours before there was reaction under punch, anodyne, etc. Ten days afterwards he visited the patient, who lives in Alabama, for the purpose of finishing the operation, but even then he thought it advisable to wait longer. There is a perineal abcess of recent standing.

Dr. A. W. Calhoun said that the frequency of attacks of certain kinds of deafness, and the facility with which it could be relieved in a large number of cases should be generally known. It is caused by a stoppage of the orifice of the eustachian tube, from the swelling in the mucous membrane surrounding it, caused by catarrh, etc. The indication is to inflate the tympanum. To do this, there are several methods, but that which he practices, is to cause the patient to take a mouthful of water, he then inserts the nozzle of the eustachian catheter, which is screwed to an indian-rubber air bag, into the nose an inch, close both nostrels with the finger of the left hand, telling the patient to swallow as you count three, simultaneous with the act of deglutition exhaust the air in the bag with the right hand. An inspection of the tympanum after this procedure will show that the concavity or concave appearance, which is characteristic of a want of air behind it has been filled out, in other words, that it has assumed its normal position. You will rarely find a child who cannot be persuaded to undergo this operation, but should such a case be met with, take a piece of rubber tubing, letting it hold it in its nose itself, and as he swollows blow in the tube from your own mouth. Valsalvas' method, which consists in closing the nose and mouth, and making a forced expiration while these outlets are closed, congests the mucous membrane lining the cavity of drum, and is therefore not to be recommended. This is all that is necessary in a number of instances.

Dr. W. F. Westmoreland testified to the truth of Dr. C.'s statement, and said from personal experience he knew that relief was instantaneous.

Dr. Todd had occasion recently to prescribe quinine for bronchitis. The patient took in three hours five grains, when he was summoned. He found him broken out from head to foot with urticaria, hoarse, and nauseated. The urticaria was causing intense pain and itching; so much so that rest in same position for any length of time was impossible. It required several large doses of morphia, and eight or ten hours elapsed before he was relieved. The patient told him quinine had produced the same effects once before on him, since he lived in Atlanta, but that in South Georgia, where he had chills, it produced no such symptoms. The mother of patient, a very intelligent lady, says it affects her in in a similar manner.

Dr. W. F. Westmoreland had seen same results from jss. grain quinine and ¼ grain ex. nux vomica as a tonic.

Dr. Taliaferro had seen two cases where quinine was always followed by urticaria. In one case it produced the rash on several different occasions. There was in the other a genuine shedding of the cuticle during convalescence.

Academy adjourned.

Selections.

Phosphorus—Its Use in Medicine.—In a continued article (*Jour. of Materia Medica* of April, 1877) we find the following interesting remarks on the use of phosphorus:

In small doses it would appear to stimulate the stomach; for patients tell us that it produces a sensation of warmth at the epigastrium, and that it increases the appetite. In this way it appears to favor nutrition; it likewise increases the pulse and the temperature. One disagreeable effect is the eructation of phosphureted hydrogen, but this need not occur if it be properly administered. It is chiefly noticed when given in a fluid form.

The general stimulant effects noticed are accompanied by increased cerebral activity and increased muscular power, which implies increased tissue change. We find that it increases the action of the skin and kidneys. Under its influence also, the menstrual flow is often augmented. We are under the impression, too (though we do not find it noticed by writers), that it increases the biliary and intestinal secretions. Certainly, some patients cannot take it on account of its irritating the bowels. Phosphorus is eliminated chiefly by the kidneys. Probably a portion of it may also be eliminated by the alimentary canal, as in poisonous doses this is certainly the case, as previously mentioned. It certainly increases the excretion of phosphates by the urine; and we have observed clinically—a fact not noticed in books—that it removes deposits of urates, whether by improving the digestion or increasing the amount of water excreted, or otherwise, is worth investigating.

Having thus considered its general effects, we are prepared to glance at the various diseases in which phosphorus has been found useful, and the special indications for its employment.

If we were required to classify the properties of phosphorus under the old-fashioned terms, we should say it is a stimulant and tonic, perhaps also analeptic, and in respect to each of these possessed of a general and special action. The term alterative would also have to be resorted to in reference to some of its supposed qualities. We shall, however, consider ourselves free from this kind of classification, though we shall follow it so far as to give some order to our observations.

First of all, then, in certain general chronic diseases attended by debility and wasting, phosphorus has been found beneficial. Here it is that phthisis, tuberculosis, and various cachetic conditions, as well as the consequences of exhausting discharges, prolonged suppuration, hyperlactation, or overwork, may be considered. In such cases the hypophosphites have long been employed. These compounds have, in France, been extensively quacked as specifics for consumption, and the reflex of that quackery has reached our own country. That in properly selected cases they may probably do good seems to be shown by the observations of Drs. Thorowgood and Risdom Bennett, but it is not improbable that the pure metalloid will be found to replace them often with advantage. As a rule, if they disagree with the stomach they do harm, whereas when they appear to promote digestion and increase flesh they should be persevered with. When cod-liver oil seemed to be indicated it has sometimes been made the medium, but the taste of phosphorized oil is so nauseous that patients often refuse to take it; and as it is desirable they should not be disgusted with their oil, it is better for the metalloid to be taken in pills during a course of the oil or its emulsion. In consumption, in struma, in rickets, in mollities ossium, and in other cases affecting the bony system, this treatment seems to have some claim to be considered analeptic as well as tonic.

As a diffusible stimulant, as evinced by its effect on the vascular and muscular systems, it has also been employed in cases of profound adynamia, and some continental physicians think it useful in the typhoid state, and others have resorted to it as a stimulant in fevers and pneumonia. Dr. H. C. Wood, Jr., has seen it act favorably in such cases, but we need further experience in these cases.

In diseases of the skin, Drs. Eames, Percy, and others have attributed to it a value which may, perhaps, entitle it to be considered an alterative. They have tried it in lupus, psoriasis, acne, and furuncular affections. Its analogy to arsenic has been sufficiently obvious to lead Dr. Broadbent into a speculation as to its uses in skin diseases—a good deal more to the purpose than his hypothesis about its value in leukæmia. It has long been supposed that in the exanthemata, when the eruption recedes, phosphorus promotes its reappearance on the skin, and we have already shown that it stimulates perspiration.

On the glandular system its alterative or stimulant effects remain uncertain. Goitre has been known to recede under its influence, and the same may be said of enlarged lymphatic glands, but other remedies are in such cases far more effective, and it is probable that those which have been benefited by phosphorus would have done just as well, or even better, under tonics, iodine, or cod-liver oil. Indeed, in not a few cases the phosphorus has been given in combination with these agents, and to them, very likely, most if not all the effect has been due.

Tavignot in France, and Gioppi in Italy, have employed phosphorus in certain forms of cataract, and others have prescribed it in what they have called amaurosis, and Mr. Jabez Hogg has found it useful in atrophy of the optic nerve.

Diseases of the nervous system are unquestionably those in which phosphorus has the most claim to our attention. Here it claims a *role* which no other drug can pretend to play. Here, doubtless, it acts as a nutrient as well as a tonic. Certainly it appears to be worth a trial in an immense number of cases for which, until recently, there was no resource except rest, fresh air, perhaps sea air, and phosphorized food; in cases of exhaustion of the nervous system, so commonly induced in fashionable life, it has no substitute, and it has favorable influence in organic disease, whether cerebral or spinal; of course, in all such cases it should not be tried in the acute stage, or in stimulating doses, which might be injurious. In chronic white softening of the brain, and in paraplegia following myelitis, it has been prescribed with varying success, and may be given with iron when we have reason to believe that the condition of the nervous centres is anæmic. Dujardin-Beaumetz has tried it in progressive locomotor ataxia, and although he has not seen any cases cured, he believes that some have been decidedly benefited. Bartholomew has used with benefit phosphorized cod-liver oil in paralysis agitans. Delpech has treated a number of cases of paralysis of various forms by phosphorus. The same author reports that it is of especial value in the peculiar cachexia which affects the workers in india-rubber. He thinks that the bisulphide of carbon to which they are exposed acts as a solvent on the phosphorized brain fat, and that given as a medicine phosphorus may supply the loss. Turning to the peripheral nervous system, Dr. Anstie considers it of not much value in neuralgia, but others have met with great success, especially in intercostal and trigeminal. Those who look upon neuralgia as due to exhausted nerve power, would naturally expect that phosphorus might relieve it. Mr. Ashburton Thompson now gives it in large doses, as much as one-twelfth of a grain, though he formerly employed small ones. It should be remembered that doses of one-thirtieth have set up toxic symptoms. In the nervous affections of the aged, accompanied with feebleness of memory, trembling, and cramps, it has been found useful. The wakefulness of aged patients, which is often so troublesome, may often be rapidly relieved by minute doses. Full doses should never be given to old people. In cases of early decay of the mental powers it has been strongly recommended, as well as in cases of break-down from over-work. In impotence it has been empirically prescribed, as well as for various consequences of sexual excess. Acton and others have given it with marked success in the cachexia induced by masturbation. If it be combined with iron, and care exercised in discriminating the cases, the effect in restoring mental vigor is often remarkable. It should be employed with caution, and never when there is any tendency to plethora, cerebral congestion, or hæmorrhage.

The dose of phosphorus, according to the text-books of materia medica, varies from one-fortieth to one-eighth of a grain, but we consider the last much too high to be safe. Mr. A. Thompson prefers large doses, but we do not. In a case of accidental poisoning he gave as much as half a grain every twenty-four hours for six days, and thinks this amount "not excessive." We do, and the numerous cases in which toxic effects have followed less doses support our opinion. We agree with Dr. Kirby that it is safer and more efficacious to give small doses repeatedly than to "surprise the system" with a large dose. We consider one-twentieth of a grain a medium dose, and from one-twentieth to one-fifteenth a full dose. If repeated, it is wise not to exceed a quarter grain the twenty-four hours, and each dose should be taken with a meal.

Preparations.—The object being to introduce free phosphorus into the system, we should avoid all preparations which expose the phosphorus to oxidation during administration or after it has been taken. Solutions in oil are rather defective in this sense, and besides being extremely nauseous, they are apt to set up gastric irritation, and give rise to the formation of phosphureted hydrogen. Ethereal and alcoholic solutions possess these disadvantages also, and in consequence of their strength varying considerably with their age, are furthermore dangerous. Mr. Thompson says his tincture may be given in larger doses than other solutions—a proof, to our mind, that some of the phosphorus is precipitated in dilution, and therefore not taken at all. To give an ethereal solution pure, as some have talked of, is a safe method of detaining the phosphorus *somewhere* on its way from the bottle to the stomach. It is said, and rightly, that *solid* phosphorus should not be given; but Macnamara, in his last editions of "Neligan," showed that this observation does not apply to pills carrying the metalloid in solution. For this reason he advised suet as an excipient. The pill of the British Pharmacopœia should be rejected. It has been shown that it usually passes through the bowels unchanged. Those who have devoted themselves to the improvement of pharmacy have directed attention to the preparations of phosphorus. Among these we are glad to find some members of the profession, and it would be well if others were to follow their example. Tilden, of New York, and Dr. Kirby, of London, have both devised processes for the preparation of phosphorus pills, and Dr. Kirby's process is employed by his sons on a very large scale. Both these physicians have succeeded in converting a *solution* of *phosphorus* into a mass of such consistence that it is easily (with proper excipients) made into pills. By Dr. Kirby's process this is done without exposing the phosphorus to oxidation, and it is so well held by the excipients that it does not give rise to any local irritation in the stomach, and is not followed by eructations of phosphureted hydrogen. He has managed to effect this without allowing it to become oxidised. To accomplish this entails, we hear, much care and skill, as well as some danger, throughout the manipulation. Nothing can be easier than to make powdered phosphorus into pills, and we fear that most of the pills in the market are of this sort. Hence they are uncertain, and consequently dangerous. Other specimens are so hard and insoluble that, as in those of the Pharmacopœia, the absorption of the dose is altogether conjectural. We have not been able to meet with Tilden's pills in London, but we have examined some made by Messrs. Kirby, and found them to possess the qualities indicated. Any one can easily test these. Break up in the fingers and roll together half a dozen of these pills in a dark room, and they will be seen to be luminous, and the phosphorescence may be observed to be uniform through the mass. We have watched this for above an hour. Every time the mass is cut or broken, or indented with the nail—in fact, whenever a new surface is exposed, fresh gleams appear, and this phosphorescence is not in points, but uniformly diffused. The total absence of anything like particles of phosphorus is very satisfactory, and we believe that the method of preparing them must be as represented, by dissolving the phosphorus first, and afterwards adding the excipients, so as to preserve throughout the process the advantages of solution. We could suggest formulæ for this, but the trouble and danger involved in the manipulation would prevent any one preparing them on a small scale. The leading London pharmaceutists dispense Kirby's pills, and these are always obtainable. Few care to incur the responsibility of attempting to make their own. These pills have the advantage, too, of dissolving slowly, do not irritate the stomach so much, and are believed by many, with some degree of probability, to be only completely dissolved in the duodenum, so that the free phosphorus, mingled with the aliments, finds its way into the blood.

Phosphorized oil, in capsules, has also been tried, but with little satisfaction. Apart from the uncertainty of the amount they contain, and the difficulty of making them, the capsule envelope is itself liable to great variation, and seldom obtainable of good quality. In France Dr. Clertan has indeed brought the manufacture of capsules in the form of his *perles* to great perfection for ether, chloroform, turpentine, and other drugs. If disposed to try capsules, we should certainly prefer his manufacture, but we do not think this form equal to that of pills.

Before closing, we are bound to advert to some published formulæ worthy to be spoken of as curiosities of pharmacy, except for the fact that some are dangerous. They pass from one book to another unchallenged and without comment, and authors whom we should have thought better informed on the pharmacy of phosphorus, have quoted them, though with what purpose, as they are practically useless, it is difficult to divine. Why perpetuate obsolete prescriptions which are likely to do harm? We have met with some of these in which directions impossible to follow are given. Thus as late as 1873 we actually find this credited to *Burgess*, in a work on skin diseases:

℞.—Phosphorus,	g. iij. to xx.
Almond Oil,	gtt. x. to lx.
Powdered Acacia,	q s.

Make twelve pills.

Dose, one twice a day. Use in lupus and syphilitic tubercular disease.

How many persons have been poisoned by this it may be difficult to say. Perhaps the difficulty of dispensing the prescription may have saved some lives, but we are astonished beyond measure to find a careful teacher admitting into his work a formula which is too defective to attempt to prepare. If by some means ten or twenty grains of it was got into twelve pills, most assuredly the person who took them would be *poisoned.* Twenty grains of phosphorus in twelve pills!!

A very similar formula was for many years a standing dish in Hooper's "Physician's Vade Mecum." In the last edition we are glad to see it omitted. With such formulæ floating about, we cannot be surprised that phosphorus acquired the reputation of being a violent irritant poison; but during the last few years it has been given right and left, and is taken just like any other tonic, and we hear nothing of poisoning, except in a few solitary cases, in which it has been clearly proved that its dose was excessive or its preparation defective. *The Doctor.*

SEPTICÆMIA AFTER AMPUTATIONS.—*By W. W. Jones, M.D., Toledo, O.*—Septicæmia is, comparatively, a modern term, to represent blood poisoning. Most of the writers up to the present time have been content to use the term pyæmia, to express a condition which has been well known, under the supposition that it was produced by the absorption of pus.

The condition plays a most important part in disease, in obstetrics, in injuries, and in surgical operations.

Time and opportunity would fail me to dilate upon the general subject, and I shall only attempt to call your attention to its influence in amputations.

The practice of uniting the flaps after the amputation, for the purpose of obtaining immediate union, originated in England during the latter part of the last century, and has been termed the English method, in contradistinction to the plan followed by many of the French and other continental surgeons who believed that the wound should be allowed to granulate.

The great Frenchman, Baron Larrey, disapproved of the attempt to unite the wound after amputation by first intention, and very many of the French surgeons to this day follow his example; in opposition to which it has been said to be the pride of English surgeons, and an evidence of their superiority, that they had adopted the plan of bringing the edges of the wound together after amputation so that they may unite by the first intention.

These are great and radical differences of opinion, and as our methods in this country have been borrowed from England, it is especially pertinent to investigate the subject, in order that we may come to an understanding of the truth. It cannot be questioned that Baron Larrey had a larger clinical experience than any other man who had lived before or even since his time; and it is also true that the utmost confidence was placed in his skill and integrity by the people of France, and the profession of the civilized world. He placed great stress upon the necessity of free drainage until healthy granulations had commenced; for, he contended, *they did better*, and we have no reason to suppose that he obtained this opinion except from his clinical experience, and the English practice was as well known to him as to us. The great German surgeon Chelius, in his work on surgery, says: "Many practitioners have exaggerated the evils accompanying the cure by suppuration and granulation, for the wound after amputation of large limbs never takes place by complete agglutination in the strict sense of the word."

Gross says that "the most common constitutional occurrences after amputations, especially of the larger limbs, are excessive prostration, traumatic fever, pyæmia, congestion of the lungs, retention of urine, and as a secondary consequence, hectic irritation."

In treating of the danger after operations, this justly celebrated author says: "More or less fever must almost necessarily follow every severe operation, offering thus an additional source of suffering and danger to the patient, and of anxiety to the surgeon.

"To this disease the term traumatic is usually applied; the older writers called it bed or wound fever, and Dr. Simpson has given a most excellent account of it under the name of surgical fever.

"It generally begins within the first six or eight hours after the operation, and is characterized by a flushed appearance of the face, a frequent, quick, and irritable state of the pulse, dryness of the skin, restlessness and thirst, which is often excessive, especially after profuse losses of blood. In some cases there is extreme jactitation, with nausea, if not actual vomiting, and a tendency to delirium, or a confused and bewildered condition of the intellect.

The breathing is generally somewhat hurried, and slight mucous rales are often present. The appetite is impaired or entirely wanting, the bowels are often constipated and the urine is scanty, high-colored, and often offensive, being surcharged with saline matters, and occasionally even slightly albuminous. Now and then the disease is ushered in by distinct rigors. After the fever has continued for some time, a tendency to remit appears; the heat, thirst, and restlessness diminish, the pulse descends, the gastric distress vanishes, and the skin becomes covered with a gentle moisture, which often increases to profuse perspiration.

"The duration of traumatic fever varies from a few hours to a number of days. In the milder cases it is generally very evanescent, while in the more severe it is often quite protracted, and is then usually attended with regular vesperal, if not also matinal, exacerbations.

"Frequently the disease disappears entirely for a few days, and then recurs, with more or less violence, the attack being provoked either by some dietetic or other indiscretion on the part of the patient, or by some change of the system, as the arrest of an important secretion, or the commencement of blood-poisoning.

"The causes of surgical fever are sufficiently obvious. Every operation of the slightest severity acts as a disturbing agent, depressing the vital powers, and deranging as a direct and inevitable consequence, all the secretions. We have familiar illustrations of these occurrences in daily practice, in the lancing of boils, the extraction of teeth, and in the operation of bleeding. The least shock, however induced, is sure to be followed by more or less general disorder, and it is hardly necessary to state that the amount of this disorder is always materially augmented when, in addition to the nervous lesion, there has been considerable loss of blood. Nothing so rapidly or so powerfully irritates and frets the vascular and nervous systems as these two circumstances. The heart evinces its suffering first, by the feebleness and irregularity, and, after the occurrence of reaction, by the frequency and rapidity of its contractions. The nausea and vomiting, the excessive prostration, the yawning and confusion of intellect, not to mention other symptoms, are unmistakable signs of the shock, or loss of power, sustained by the great nervous centers. The use of anæsthetics, doubtless, often contributes to the production of traumatic fever, by the disturbance which it occasions in the general system.

"Now, if we take all these circumstances into view, and the fact that thousands of patients are subjected to operations without due preparation of the system, or, indeed any preparation at all, as in cases of primary amputations, trephining, and the ligation of the larger arteries for the arrest of hemorrhage in gunshot and other wounds, *it is certainly not necessary to invoke the agency of blood-poisoning, as is of late frequently done, to account for the occurrence of traumatic fever.* These causes are all sufficient to create the most violent disturbance, or, in other words, to set the whole system in a perfect state of ferment, overturning all its functions, and thus occasioning an amount of reaction capable of destroying life in a few hours, or at all events, in a few days. While this perturbation is progressing, other and still more serious consequences may ensue, as erysipelas, pyæmia, and effusions into the splanchnic cavities, the result of disordered secretion and of the retention of hurtful matter, eventuating in a diseased state of the blood, and in a predisposition to local inflammation in parts more or less remote from the seat of the original injury. The constitutional derangement will, of course, be materially increased if, in addition to these disturbing agencies, there is an absorption or ingress of foul pus into the system, constituting toxæmia, or blood-poisoning."

This description of surgical or traumatic fever after amputation given by Dr. Gross, will not vary greatly from such a case of septicæmia after ovariotomy, either in its symptoms or results, as might be detailed by a number of surgeons whom I could mention, and probably by some who have just listened to it.

When we take into consideration the fact that the sero-sanguineous exudation, which drains from an amputation wound, is subjected to a heat of not less than 95° Fahrenheit, and in six hours has a strong, and in twenty-four hours a decidedly bad odor, and also the fact now well known, that absorption from this surfrce is active and efficient, it is no wonder that the agency of blood-poisoning should be invoked to account for the occurrence of traumatic fever.

It will not do to charge it to the loss of blood, as intimated in the quotations from this author, because the well known phenomenon accompanying this symptom in parturient subjects is totally unlike that witnessed by the surgeon in cases referred to, and I will not detain you by going into a detail of the differential symptoms which go to make up the two distinct classes of phenomena.

Wagner, in his general pathology, says that "all the phenomena of traumatic fever in man are best explained by the hypothesis that it is dependent upon inflammations set up, not by the injury itself, but by septic processes taking their start in the wound.

"It is most probable that the fever is caused only by spores which enter the blood through the wound, and that sepsis is the result of vibrionic putrefaction. To what degree these inflammations of the wound and the fever dependent thereon are developed, or whether they develop at all, depends upon the nature of the wound, the mode of dressing, the state of the atmosphere in which the patient is, the mechanical factors which favor the entrance of putrid substances into the tissues and the blood, upon the quality of the putrid substances, intensity of their inflammation—producing (phlogogenic) and heat—producing (pyrogenic) activity, etc. Consequently, if immediately after a wound or operation the temperature suddenly rises, it is possible that an infection, direct or indirect, of the wound has occurred, or that inoculation with a pyrogenic substance has taken place. Among other means, the quick removal of the infecting inflammatory focus is necessary in order to bring the fever to an end.

"The following account of the simple fever which accompanies wounds—'traumatic fever'—is sufficient for clinical purposes:

"Traumatic fever lasts from one to seven days and more, without any tendency to cease on any particular day; it is continuous with the secondary fever (after the seventh day) in case of severe injury, and even in cases of accidental inflammation and suppuration. The highest temperature is attained in traumatic fever on the first or second day, seldom from the third to the fifth day, very rarely later; still the temperature may rise higher in the secondary fever.

"In septicæmia the temperature is, as a rule, very high in the beginning, and later becomes very low; though there are cases in which it is low at the commencement and never rises very high; it sometimes hardly exceeds the normal.

"Death may occur at any point of these oscillations of temperature, or it may follow a rising high temperature, or one falling far below the normal. In its course chills are exceedingly rare."

The experiments of Billroth, Weber, and Bergmann, by injection of putrid substances under the skin and into the veins of animals, are interesting as confirming the premises laid down by Wagner.

Billroth does not hesitate to declare in his most recent work that "traumatic and inflammatory fevers arise through the absorption of pyrogenic substances, produced upon, or in the wound, or from such as are deposited upon it. The intermissions of traumatic fever chiefly depend upon the intermittent taking of the infecting body into the blood; and that chills were more dependent upon the absorption of *purulent* than upon that of *ichorous matter*."

I think the experience of every surgeon will bear me out in the statement that a large majority of the cases that die during the first week after amputation, are attended with surgical fever, and that it is during this period that absorption and septic activity must prevail. After suppuration has commenced the phenomena are to a considerable extent changed, and complications, believed to be due to emboli and hectic, make their appearance, and produce death by a combination of causes which may be traced to the joint action af septic and pyæmic causes.

It is only within a very few years that attention has been given by the profession to the prevention of septic influences. In this country it has been greatly promoted in its surgical aspects by the experience of the late war of the rebellion. Mr. Lister, of Edinburgh, has achieved an enviable success by means of the carbolic spray and strict attention to the details of cleanliness.

Professor A. B. Crosby, of Bellevue Hospital, in a recent paper read before the New Hampshire State Medical Society (1876), speaks of cleanliness as "one of the lost arts to be restored in surgery."

The paper abounds in facts and clinical data upon the subject of septic poisoning, and the means to be made use of to prevent or overcome it, so that one cannot help being convinced that the utmost vigilance and care, in respect to cleanliness, will well repay the surgeon for his efforts. It will no longer do for the surgeon to use the sponges, bandages, bedding, and linen which may have been previously about another patient, no matter how well it may have been washed. The room itself that has been used by a patient with septic disease becomes a receptacle of foci, which may propagate disease in the unfortunate victim who next occupies it.

Recently the practice of leaving wounds open after amputation has been adopted in some of the surgical wards of Bellevue Hospital, by Dr. James R. Wood, thus affording ample drainage until a healthy granulating surface has been obtained. He uses the pillow of oakum, irrigations of carbolic acid water, and has the open wounds smeared with balsam peru, and requires that no hand or instrument shall come in contact with a wound without first being washed in carbolized water or a solution of chlorinated antiseptic.

Dr. Dennis, house surgeon of Bellevue Hospital, details, in a recent number of the *New York Medical Journal,* ten cases of amputation of the thigh, leg, arm, and knee, by Dr. Wood. The cases were generally those of compound comminuted fracture, in patients of intemperate habits, and the results were rapid recovery without a death; very mild suppurative fever, in which the temperature never exceeded 103°, but was more frequently much lower; in no case was there erysipelas of the stump, or abscess, or sloughing, and the resulting stump was very satisfactory in form and for the purposes of an artificial limb.

My time and space will not permit me to quote from the papers of Dr. Crosby and Dr. Dennis, which must be read to be appreciated.

Our surgeons in the late war of the rebellion reported unexpectedly favorable results when they were unable to close the wound after amputation, either from want of materials with which to do it, or other causes beyond their control; and they can only account for such good results upon the hypothesis that there was less opportunity for blood-poisoning by the absorption of septic material from an open wound, than would have been the case had attempts been made to close them up.

The treatment of amputation wounds without closing, so far as trials have been made in this country, have proved eminently satisfactory, and would seem to demonstrate conclusively that our previous methods (borrowed from the English) of closing the flaps so that it may heal by first intention, instead of being an advantage, is really prejudicial; and that we must admit that the older continental surgeons were right in refusing to be convinced against their experience, or if I may be permitted to use a word heretofore unknown in medicine, *bulldozed* into admitting that the English practice was the best.

The exact value of antiseptics in the treatment of open wounds has not yet been very fully tested; nor are we yet able to fully explain the causes of septicæmia, or whether it is connected with bacteria or other minute organisms, or is analogous to the poisonous fluids of infective diseases. Still enough is known to establish beyond a doubt that they are essential to the prevention of putrefaction, which if permitted to go on, may not only poison the vital fluid, but as all surgeons know, powerfully depress the nervous system.

From what has been said, it follows that the patient, after amputation, must not be poisoned by the absorption of his own excretions or exudations, even if it overturn the long cherished pride of English surgeons in their adopted plan of bringing the edges of the wound together after amputation, so that they may unite by the first intention.

The use of sutures and adhesive plasters must be discarded if we would prevent absorption of those elements which nature casts out of a wound made by amputation. It is too late now to say that public opinion may not sustain the surgeon in what may very properly be called *an air dressing;* for public opinion may be in the condition that Martin King once found himself. A good many years ago Martin had a compound fracture of the leg near the ankle, and I was compelled to saw off more than an inch of the end of the tibia in order to reduce it. It was hot weather, in July, and the flies were thick. One morning early a messenger routed me out of bed to go and see him, as he thought he would soon die. On arriving at his bedside, King gravely told me that the maggots had been going up inside of him all night, and had now got into his brain; "he could feel them there, be jabers, no mistake." Martin King has since become convinced that he *was mistaken.*—*Toledo Med. and Surg. Jour.*

SUBACUTE RHEUMATIC ARTHRITIS.—*By Erenæus S. Davis, M.D., of Allentown, Pa.*—In the *Reporter* of January 6th, a correspondent asks for suggestions in the treatment of rheumatic arthritis. It is much as if one should ask for a plan for the cure of fever. The conditions liable to be called rheumatic arthritis, and which, by different persons, are severally recognized in that name, are quite various, and of every degree of gravity, from neuralgia affecting the capsule and surrounding parts, to general acute rheumatism. It is, indeed, rather rare to find two physicians of ordinary intelligence and experience, who will fully agree in their nosology, or even in their diagnosis and etiology of diseases commonly comprehended in this class. So much confusion exists in this regard, that it could almost be wished that the very name of rheumatic arthritis might be totally abandoned, and a more exact nosology adopted. It is not always easy to discriminate between some of these conditions, although they are essentially different. The case referred to is most probably what, from analogy and for convenience, we may call subacute rheumatic arthritis. This is quite a different affair from either the acute or the chronic form. It rarely or never occurs except where there is a pre-existing rheumatic diathesis. It is gradual in its accession, usually giving little trouble for months, or even years, and the first few years of its existence frequently comprise considerable periods of entire remission; except when complicated with neuralgia or some form of malarial disease, it is but moderately affected by meteorological conditions. It affects, by preference, the wrists and ankles, and is more likely to extend toward the extremities than in the opposite direction. Frequently it is confined to a single joint. It is commonly first noticed as a slight lameness, or perhaps, only a sense of weakness, and is likely to be attributed to a supposed sprain. A careful examination at this time will detect a very slight tenderness of the articular cartilage, with, possibly, a corresponding tenderness of some of the ligaments, but nothing more. It is to be distinguished from simple arthritis, or synovitis, by the absence of effusion within the capsule, from chronic rheumatic arthritis by the free mobility of the joint, the absence or small degree of infiltration, and the history of the case, and from a sprain by the absence of febrile symptoms, of discoloration, of extensive infiltration, and of any considerable localized tenderness in the ligaments. It is not likely to be mistaken for acute rheumatic arthritis. As time passes, the symptoms become intensified, and frequently there is very considerable febrile action around the joint, accompanied by a moderate amount of infiltration, though from first to last there is little or no effusion within the capsule. At this stage the pain is constant, but subject to great exascerbations. Usually, there is more pain toward the latter part of the day, or in the evening, as well as when general fatigue has been incurred. The skin often now becomes red, shining, and exquisitely tender, and sometimes, from reflex irritation, the muscles, both flexors and extensors, become permanently contracted. From this cause, and also from the pain which motion now produces, the joint at length becomes rigid, and may be quite anchylosed

The treatment must aim to remove or abate the systemic vice which gives rise to the disease. Gradually, and with much hesitation, I have been led to look upon the iodide of iron as almost a specific for this purpose. The form in which I prefer to use it in these cases is in pills, made according to the formula of the United States Pharmacopœia for 1851, as follows:—

℞.	Ferri sulphat, ...	ʒj	
	Potass iodid., ...	℈iv	
	Tragacanth pulv., ...	gr.x	
	Sacch. pulv., ...	ʒss	
	Syrup, ...	qs	M.

Ft. mass., et in pil. No. xl div.

Two or three of these pills may be given after each meal. The iodide of potash has not, with me, proved nearly so efficacious in these cases as this preparation, nor have other forms of the iodide of iron. I always have the pills freshly prepared when wanted, and whether it is owing to this fact, or to the presence of sulphate of potash with iodide of iron, resulting from the double decomposition, or to some other cause, I cannot tell, but I have rarely met with a case of subacute rheumatic arthritis which was not arrested by this treatment if used in the early stages. Later in the course of the disease the prognosis is not so hopeful, but still the same general plan of treatment is indicated, while it should be supplemented by measures addressed to special conditions. Most of the phenomena which are developed late in the history of the disease are really complications depending wholly or in part on reflex irritation, or on some inter-current cachexia or diathesis. Malaria and various neuroses are among the most common complications. All these are to be carefully searched out and appropriately treated. Neglected, they seriously aggravate the original disorder, and render a cure almost impossible. The inflammation of the skin and the infiltration are usually of reflex or of neurotic origin. Many of the complicating neuroses are well treated by electricity, though it is at least doubtful whether this ever has any directly beneficial effect upon the disease itself. Occasionally surgical interference may become a necessary auxiliary to the general treatment, as, for example, in some cases of rigidity or anchylosis, great muscular contraction, or excessive superficial inflammation. When the pain is very troublesome the following liniment will often be found to give great relief:—

℞. Tinct. iod.,
Glycerin, ... aa. ℥j
Linim. sapon. camph., . . . ℥ij M.

It is to be borne in mind that nearly every case of this affection is anæmic. Frequently they have the appearance of plethora, but a close observation will almost invariably prove that this appearance is generally caused by a fatty deposit, by no means indicative of a healthy state of the blood.

Another thing to be remembered is, that, though the disease be cured, the diathesis remains, and a new manifestation may occur at any time. The best prophylactic management consists in maintaining the highest possible condition of general health.—*Med. and Surg. Reporter.*

On the Best Means of Promoting Union by First Intention.—*By E. W. Lee, M.D., Chicago.*—Ninety-nine practitioners out of a hundred will proceed to dress an incised or lacerated wound by bringing the edges together, and maintaining them in position—or trying to—by means of strips of adhesive plaster or interrupted sutures of silk. For several years I have been in the habit of using needle sutures for all wounds, varying the size and shape according to the location and depth of the wound. For all wounds not very deep, I use Sharp's No. 12 cambric needle. It is very small, and is easily introduced and extracted.

If plaster be used, no matter how carfully it may be applied, in a few hours it stretches, permitting the edges of the wound to gape although the apposition was perfect when leaving the hands of the surgeon. If interrupted sutures of silk be used in the ordinary way, the edges of the wound are brought together, leaving underneath a cavity for the accumulation of discharges and subsequent suppuration; the silk causes more or less irritation immediately, it begins to cut, and unless taken out in 24 hours, leaves an ugly mark at the seat of the suture. In all wounds over one-third of an inch in length, I use these needle sutures. We all know what an unerritating substance steel is. Needles have entered the body and remained there for years, causing no inconvenience whatever, coming out in an entirely different location from where they had entered. Suppose we have a wound to dress, say one and a half inches long. I proceed in the following manner: Carefully cleanse the part of all foreign matter, *and wait for hemorrhage to cease.* Then if the location and depth of the wound be suitable, take a No. 12 cambric needle in a needle holder, insert it a proper distance from the edge of the wound, push it through at about half the depth of the wound, bring the point out about the same distance on the opposite side. Take now a piece of stout ligature silk or thread, and surround the transfixed tissue and draw the edges of the wound together. Put in as many sutures as may be necessary to secure perfect apposition, and the dressing is complete. It is useless to put on plaster in addition; they stretch, they are unsightly and unclean. In dressing wounds by this method pressure can be made so as to bring the edge of the wound together *from top to bottom;* no space is left for secretions to accumulate; no chance is left for stretching, and for the edges of the wound to gape; the pressure being so equally distributed, the suture does not cut through as a silk one will. The only objection to allowing the sutures to remain for four or five days, is that after forty-eight hours they are difficult of extraction. This difficulty I have overcome by having the needles electroplated with silver. To extract the needle, I take the end of the needle holder, gently turn it round in the wound once or twice, and then withdraw it. I do not cut the silk, it remains adherent, the blood and serum forming an incrustation, holding the silk in position; this I am careful not to disturb. I once dressed an incised wound 24 inches long, in the manner described. Between 40 and 50 needles (No. 12) were used; every portion of the wound healed by first intention. The advantages of this plan do not by any means end here. Suppose the radial, temporal, or palmar arteries be wounded; many practitioners not expert will spend considerable valuable time in seeking and ligating any of these vessels, and consequently more loss of blood than need be is occasioned. Here the needle suture is not only the best means of bringing the edges of the wound together, but it is the quickest, easiest, and safest means of stopping the hemorrhage by acupressure. I have repeatedly adopted this plan in all the above-mentionde accidents, and always with the utmost satisfaction. Suppose union by first intention does not take place; then cut the silk, withdraw the needles and the amount of retraction that takes place will not be nearly so great as it would had they not been used. I usually succeed in getting union by first intention, and when I have failed it has been either from a faulty condition of the system, or from being too hasty in the application of the dressing. In incised wounds about the neck and face, where primary union is so desirable, this plan is peculiarly suitable. In scalp wounds, prudent practitioners hesitate to use silk sutures, so apt are they to set up erysipelatous inflammation; to make plaster adhere it is absolutely necessary to shave the scalp for a considerable space around the wound. Use needle sutures, and it is not necessary to remove any hair at all, and they may remain in the scalp as long as may be necessary with impunity. This may seem a very small matter to say so much about; but with most of us, dressing wounds is an every-day occurrence, and any improvement that may be introduced, however small, is of practical importance. I have tried this plan so long and thoroughly, and with so much gratification to myself and patients, that I felt it a duty to urge its substitution for silk and plaster entirely. It is not, of course, original with me, yet it is not adopted to any extent by the profession. I am confident that if the dressing be carefully done by those adopting this method, the attending success will be so uniform as to prohibit the employment of any other.—*Chicago Medical Journal and Examiner.*

Editorial.

MEDICAL ASSOCIATION OF GEORGIA.

This body held its annual meeting, for the present year, in Macon, on the 18th, 19th and 20th of April. The meeting was held in the same block where, about thirty years ago, the Association was organized with Dr. L. D. Ford, President.

The usual address of welcome was delivered by Dr. J. E. Blackshear, and was responded to by Dr. K. P. Moore.

About fifty members were in attendance, some half dozen or more of whom were admitted to membership at this meeting.

On the call for reports from sections, several papers were announced, by title, and afterwards read in regular order. Quite a number of voluntary contributions were also read during the meeting. Taken altogether, the number and quality of the papers presented indicate a lively interest felt by the profession in the Association and in the cause of medical science.

From the section of Practice of Medicine, Dr. W. R. Burgess—"Acute Rheumatism occurring two weeks after parturition, attended with suppuration. Recovery."

Dr. W. A. Green—"The physical and mental derangements resulting from the moral effects of the war."

Dr. G. F. Cooper—"Report of cases."

Dr. D. W. Hammond—"Elephantiasis"—"Lithotomy."

Dr. Charles P. Gordon—"Reminescences from the Case-Book of Memory and Surgical Report from 8th Congressional District."

Dr. J. G. Westmoreland—"Some evidences of Progress in Medicine." He also read a letter from Dr. J. T. Banks, in which mention is made of an epidemic of diphtheria that prevailed in Pike county; and of yellow fever in refugees from Savannah without communicating the disease in a single instance.

Dr. E. H. W. Hunter—"Report for 8th Congressional District."

From the Section of Gynæcology, Dr. LeHardy—"Report for 1st Congressional District."

Dr. A. J. Shaffer—"Report of two cases of Gynæcological Surgery."

From Section on Surgery, Dr. R. B. Doster—"Snag eight inches long piercing the abdomen. Extraction and recovery."

Dr. T. F. Walker—"Amputation for extensive necrosis of tibia"—"Gunshot wound with paralysis"—"Transverse Rupture of the Uterus."

Dr. A. W. Calhoun—"Successful transplanting conjunctiva of a rabit in the human eye for relief of deformity"—"Defects of hearing, etc., the result of enlarged tonsils requiring their excision."

Dr. R. M. Smith—"Ligation of the Primitive Carotid Artery."

Dr. A. J. Shaffer—"Report for 9th Congressional District with cases."

The voluntary contributions are as follows:

Dr. J. C. LeHardy—"The history, causes, nature, pathology and treatment of Yellow Fever, considering exclusively the epidemic of 1876, in Savannah." Also, "a successful case of Conservatine Surgery."

Dr. Jno. Thad. Johnson—"A comparison of several methods of treating Stricture of the Urethra."

Dr. Wm. Rawlings—"Case of Vaginal Tumor with Pathological Specimen."

The following verbal reports were made:

Dr. Robert Battey presented a modification of Atlee's uterine dilator, by Wilson, of Philadelphia, and spoke approvingly of it. He also alluded very favorably to the substitution of cinchonidia for quinia—uses it in same dose of quinine with satisfactory results.

Dr. J. H. Kenan reported a case of fractured tibia and fibula in an old man, who was the subject of epilepsy, successfully treated by plaster of Paris apparatus.

Dr. Wm. Abram Love presented a stem pessary of his own invention, made of copper, with a coating of zinc. The manner of retaining it in position, and its benefits were described.

Drs. Geo. F. Cooper, J. C. Johnson, and J. G. Westmoreland participated in a verbal discussion on the conditions necessary to the production of malaria.

At eleven o'clock on the second day the Annual Oration was delivered by Dr. J. S. Todd, of Atlanta, to an audience composed of citizens and members of the Association, on medical superstitions and the influence of the mind over the body. The subject is a very interesting one, and the address was made attractive by the felicitous style of the orator.

On motion of Dr. V. H. Taliaferro, Drs. W. A. Love, Jno. M. Johnson, Jas. F. Alexander, W. O'Daniel, and T. S. Hopkins, were appointed a committee to use their influence with the Legislature to have the laws in relation to the State Board of Health so amended as to render it practical and efficient. The committee was also directed to present this subject to the Constitutional Convention also.

A communication was received from Attorney General Ely, relative to the Board of Health.

The following by Dr. H. Smith, of Augusta, was adopted:

Resolved, That the special tax imposed upon physicians of this State is unequal and unjust, and that a committee be appointed to memorialize the Legislature to remove it.

The report of the committee on Inebriate Asylum was read, showing the failure to obtain favorable consideration by the Legislature.

Dr. Wm. O'Daniel resigned the office of Treasurer, and received a vote of thanks from the Association for his four years faithful service.

The following officers were elected on being reported by the nominating committee:

President, Wm. O'Daniel, of Twiggs; 1st. Vice President, D. W. Hammond, of Macon; 2d Vice President, S. B. Hawkins, of Americus; Secretary, J. B. Baird, of Atlanta; Treasurer, Wm. R. Burgess, of Macon.,

Dr. C. H. Hall, of Macon, was appointed to the vacancy on Board of Censors.

Atlanta was selected as the place of meeting on third Wednesday in April, 1878.

We hope the committee of arrangements will make such ample and convenient preparations that the large attendance expected may be agreeably entertained.

TAX ON PROFESSIONS.

The laws in Georgia were thought to be oppressive and unjust when the whole revenue of the State was obtained by special tax, without strict regard to the value of property. Land, for instance, whether rich or poor, was taxed a mere nominal amount per acre, while the bulk of taxes was raised from other sources.

Finally, the *ad valorem* system was adopted, but very imperfectly, as will be seen by reference to the large number of items for special tax.[1] Physicians, lawyers, etc., are made to pay a certain specific amount, in addition to the advalorem on property and income. This, it may be urged, is just and proper, on account of the protection afforded by special license from the State; but it must be remembered that the license serves, and was intended, for public protection, and not for the person licensed. Why is it that a lawyer or doctor must stand an examination before a board legally appointed, before he can be entrusted with the life or property of individuals? Certainly, not to protect himself against the rivalry of others who may seek to become his competitors in business, but to insure his competency to discharge the duties of his profession to patient or client. If, then, any debt of gratitude or money is due the State for the protecting influence of license, it is certainly from the public, or those served by the professions, rather than from the professions themselves.

The resolution on this subject, passed by the Georgia Medical Association at its recent meeting in Macon is, we think, a move in the right direction. The physician who serves the public faithfully, and, in some instances, gratuitously to the amount of one-fourth of his year's labor, should not be subjected to the onorous State and municipal taxation that is imposed on him. We claim nothing for the work of charity bestowed on those unable to pay, but we do think that this poor privilege of working for the public for nothing and supporting ourselves should entitle us to equality, at least, with other people in point of taxation. Practicing physicians of this city were once subjected to ten or twenty dollars tax by the United States government, ten by the State, and at one time twenty-five by the city; all of which amount to, at least, forty-five dollars per annum. All this was assessed in addition to the regular tax on property and income, which physicians pay like other people.

Now, this is simply monstrous, unjust, and oppressive. Moreover, while this unjust discrimination is made against physicians in the matter of taxation, they are denied the advantages of merchants and others in the collection of debts from those who seek to defraud them. While certain other classes of creditors are allowed to garnishee employers to secure a debt, physicians are debarred this privilege.

We hope the profession will assert their rights, in a manner to be heard and recognized in the halls of legislation.

EDITORIAL CORRESPONDENCE.

NACOOCHEE, GEORGIA.

Dr. J. G. Westmoreland:

DEAR SIR—Allow me in this note to commend your article, and views, as expressed in the March number of this JOURNAL, on the subject of meningitis, and to say that, if my experience is worth anything, and if I have been able to draw correct conclusions from my observations in intercranial inflammations, these all go to confirm the position which you seem to occupy on this important subject.

I am one of the minority with which you allign yourself, not from favoritism nor preconceptions, but from both experience and theory. Then, of the "distinguished medical authority" on the other side let me ask, are they distinguished for their success in the treatment of this disease? If not, how is the tree to be known? Where is the fruit? I was talking with one of these distinguished gentlemen, some time ago, on this subject, and was advocating the use of the lancet. "Do you bleed," he asked, "for meningitis?" I answered emphatically, yes, and cited a case which I had treated not long before—a very distinct and well marked case of the cerebrospinal disease, in a boy five years old—in which I practiced general bleeding three times in the course of a day and a half, which, with auxiliary treatment, resulted in the relief of the alarming symptoms and the recovery of the patient. "Well, now," said he, "to tell you the truth, the only case of it I ever cured was a case that I bled." On the next visit to this case, after the first bleeding, and administration of morphine and calomel, it was gratifying to observe the improvement in the symptoms, and especially in the pulse, which, from small and frequent, had changed to rounder, fuller, and much less frequent. In short, the pressure upon, or the oppression of, the nervous centres having been considerably relieved, the case had been changed from an apparently asthenic, into one of an opposite character. But this was not enough; the then sthenic condition had to be watched and treated, and the restraining force had to be continued until the inflammatory condition yielded. I have not kept a record of my cases, but of about ten cases that I can now call to mind, of cerebral and cerebrospinal meningitis treated with venesection as one of the remedies, seven have recovered and three died. Of these three, one died of relapse brought on by over exertion, after having been fairly and hopefully convalescent, and the other two were not bled soon enough, or in the most propitious time; while of five cases that I have known, not treated with venesection, all have died. I will not say that the general abstraction of blood is absolutely necessary, or called for, in all cases of meningitis, but in such cases as have fallen under my observation, I think it was generally a *sine qua non.*

Since your article was published, another has appeared from Prof. Banks, (see this JOURNAL for April,) in which he says: "I am forced to regard it as general disease, dependent upon some unknown epidemic influence—a malignant epidemic fever," etc. My observation has led me to believe that it is most frequently caused either by exposure to inclement weather, or by the peculiar epidemic influence which results in that disease of protean features known as *influenza;* and that meningitis is one of its ways of manifesting itself, just as bronchitis, tonsilitis, pleuritis, pneumonitis, peritonitis, cellulitis, erysipelas, neuralgia, spinal rheumatism, etc., are some of its ways of manifesting itself, and that it (meningitis attending influenza) is a "general disease," and a "malignant epidemic fever," to this extent, and to this extent only. But I will venture the prediction that, to such as consider it to be, and treat it as, a malignant epidemic fever, ignoring the importance of the local symptoms and condition, it will continue to prove an *opprobrium medicorum.* Does this form of disease occur without head symptoms of a grave character, as an early and prominent feature of the attack? May not an overwhelming irritative engorgement, as a first stage of inflammation, depress the vital functions, and even destroy life, before time has been given for the plainer lesions of developed inflammation? I think it may, yet this should not prevent it being properly called a local inflammation. Some seem to strive to lose sight of the local symptoms and condition, while contemplating the supposed malignity of a general disease, for Dr. Banks says: "The disease being a specific malignant fever, the usual lesions found after death should be regarded as secondary, and not as a primary and local inflammation;" and again, "the rapid fatal results, often before any structural lesions can be found, demonstrate the existence of an active malignant case," etc. "Local lesions" occur, but they are "commonly developed as the disease progresses," scarcely by inflammation, but by malignancy perhaps. My opinion is, that inflammation oftener produces lesions and milignancy, than malignancy produces inflammation and lesions. Be this as it may — for the good of humanity, for the credit and honor of the profession, and for the advancement of science, this question should be settled. Let the discussion continue to that end. In conclusion, it appears to me we have too many contagions, too much septicism, too many bacteria, too much mysterious malignancy, in these days, for the good of medicine. But

"Truth crushed to earth will rise again."

Yours, truly, E. F. STARR, M. D.

Bryan, Texas, April 2, 1877.

Editors Atlanta Medical and Surgical Journal:

For some months past our city has been visited by an epidemic of "roseola." This affection may embrace a considerable number of morbid states of the skin. There is, I know, great confusion among dermatologists as to the distinction between roseola and other short-lived inflammation of the skin. The difference of opinion among the profession here has prompted me to write this article. Roseola, as has been stated, is a name of common and somewhat indefinite application. This affection, in the epidemic referred to, was not so common among adults as children, neither were its sequelæ and complications as fatal. The rash was preceeded for a day by febrile disturbance; it generally made its appearance about the face and neck, from thence it rapidly spread over the upper extremity; very frequently did not appear on the lower.

It had a rose-colored appearance in slightly elevated circles. Toward the periphery the rose color was not distinct, or in other words, the lines of demarkation were indefinite. The diameters of the circles varied from $\frac{1}{4}$ to $\frac{1}{8}$ of an inch, disappearing on pressure, etc. Itching was not unfrequent. The eruption lasted from two to four days. The fauces were universally affected. The tonsils were enlarged in 20 per cent. of the cases. The submaxillary and lymphatic glands were tumefied in 30 per cent. of the cases that came under my observation. Deglutition was more or less painful. Pulse about 100 beats. Temperature from 99 to 101°. The morbid state of fauces began about the termination of the eruptive stage.

Differential Diagnosis:—The rate of mortality was too small for scarlatina even in its mild form. The affection being noncontagious is sufficient to my mind that it could not have been scarlet fever. The characteristic high temperature of this eruptive fever was absent. The scarlet red hue was not present in any of the cases. The duration of the eruptive stage was too short, and its sudden disappearance is evidence that it was not scarlatina.

In some respects this epidemic resembled measels. The initial stage of measles is from four to five days, rarely shorter than three days—while in this epidemic the initial stage was not longer than one day. The eruption of measels is very characteristic. When fully developed, they form true palpules, disappearing on pressure. The tonsils and pharaux are rarely tumefied in measles; if affected they are only inflamed. There are many differential symptoms that might be mentioned. But to the sequelæ of roseola! Is it not unusual for dropsy to follow this, so considered, innocent disease? In most of the text books no treatment is recommended. It is called a disease that is never fatal. This may be said of it *per se*, but its complications are as dangerous as those of scarlatina or measels. Anasarca was a sequel in 10 per cent. of the cases in the epidemic which visited us. I ask again, is it not unusual for dropsy to follow roseola, especially there being no desquamation. I examined only two cases of dropsy for albumen. I found albuminuria present in only one of the patients. I hope that this article may influence those who think roseola never fatal, in order that they may advise their patients against exposure after an attack of this trivial disease. Your Journal is highly appreciated by me. It contains valuable articles every month. Respectfully,

W. A. ADAMS, M.D.

FROM the May number of the *Virginia Medical Monthly*, we quote the following summary of facts, set forth in a historic sketch of the discovery and discoverers of anæsthesia, by J. Marion Sims, M.D., New York:

"Now let us summarize the facts set forth in the foregoing historic sketch. We know,

"1st. That since 1800 the inhalation of nitrous oxide gas produced a peculiar intoxication, and even allayed headache and other minor pains.

"2d. That Sir Humphrey Davy proposed it as an anæsthetic in surgical operations.

"3d. That for more than fifty years the inhalation of sulphuric ether has been practiced by the students in our New England Colleges as an excitant, and that its exhilarating properties are similar to those of nitrous oxide gas.

"4th. That the inhalation of sulphuric ether, as an excitant, was common in some parts of Georgia forty-five years ago, though not practised in the colleges.

"5th. That Wilhite was the first man to produce profound anæsthesia, which was done accidentally with sulphuric ether, in 1839.

"6th. That Long was the first man to intentionally produce anæsthesia for surgical operations, and that was done with sulphuric ether, in 1842.

"7th. That Long did not by accident hit upon it, but that he reasoned it out in a philosophical and logical manner.

"8th. That Wells, without any knowledge of Long's labors, demonstrated, in the same philosophic way, the great principle of anæsthesia by the use of nitrous oxide gas (1844).

"9th. That Morton intended to follow Wells in using the gas as an anæsthetic in dentistry, and for this purpose asked Wells to show him how to make the gas (1846).

"10th. That Wells referred Morton to Jackson for this purpose, as Jackson was known to be a scientific man and an able chemist.

"11th. That Morton called on Jackson for information on the subject, and that Jackson told Morton to use sulphuric ether instead of nitrous oxide gas, as it was known to possess the same properties, was as safe, and easier to get.

"12th. That Morton, acting upon Jackson's off-hand suggestion, used the ether successfully in the extraction of teeth (1846).

"13th. That Warren and Hayward and Bigelow performed important surgical operations in the Massachusetts General Hospital—October, 1846—on patients etherized by Morton, and that this introduced and popularized the practice throughout the world.

"In Boston, Mass., a monument has been erected to the discoverer of anæsthesia, but no man is designated thereon by name. The citizens of Hartford, Conn., have erected a bronze statue of Wells—by Bartlett—in their Capitol Park, claiming for him the discovery of anæsthesia. This is as it should be. We have no objection to it; and would suggest that the names of Long, Wells, Morton, and Jackson be inscribed on the Boston column—one on each side—as co-discoverers of anæsthesia. The State of Georgia will, at no distant day, erect at its Capitol or its University, a statue of Long, who was unquestionably the first discoverer of anæsthesia.

"All the claimants of the honor of discovering anæsthsia are Americans. To each is due a certain measure of credit, but no one man can claim this great honor exclusively. The names of Long, Wells, Morton, and Jackson will doubtless be associated as co-laborers in the great work, and to these must be added the immortal name of Sir James Y. Simpson, who introduced chloroform and enlarged the domain of anæsthesia.

"Sir James received the highest honor from his government in recognition of the great service he had rendered humanity. I wish we could say the same of our benefactors and government. Our great republic leaves our discoverers and scientists to rest in obscurity and to starve.

"Long lost his all during our great civil war, and in his old age he is now being worked to death for the daily bread necessary to support himself and family.

"The fate of Wells, Morton, and Jackson is most pitiable.

"Wells, disappointed in carrying off the honor of the great discovery of anæsthesia, became insane and committed suicide in New York, in 1848.

"Morton, disappointed at not receiving a pecuniary recognition from Congress for his labors, fretted himself into a congestion of the brain. In July, 1868, he returned to New York from Washington in the wildest state of excitement. Fatigue, anxiety, and sleepless nights had exhausted his vital powers. Dr. Lewis A. Sayre and Dr. Yale were called to him on the 15th July. They considered his condition as critical, placed him in the hands of a trained nurse, ordered leeches to his temples, cups on the spine, and ice to his head. Dr. Morton would not submit to treatment. As soon as Dr. Sayre left, he ordered his buggy to go to the Riverside Hotel, saying he knew he would soon be well if he could get out of the hot city. He drove furiously up Broadway, and through the Central Park. At the upper end of the Park he leaped from his buggy and ran to a lake near by to cool his burning brain. Being persuaded to get into his buggy again, he drove a short distance, then leaped out, and jumping over a fence, he fell down in a state of insensibility. He was then taken moribund to St. Luke's Hospital, where he died an hour or two later.

"Jackson has been for some time in an insane asylum, hopelessly incurable.

"How mournful the fate of these remarkable men! How sad to think that their lives were embittered with envy, jealousy and uncharitableness towards each other! Let us forget their faults, and remember only the good that has resulted from their labors.

"It is said that "The evil that men do lives after them." But here the good that these men did will live after them, and the evil forever.

"Vaccinnation is perhaps the greatest boon ever conferred by science on humanity. Anæsthesia is the next. England gave us the one. America the other. England recognized the labors of Jenner, not, however, in a manner commensurate with the magnitude of his work. America should recognize the labors of Long, Wells, Morton, and Jackson, if not in a manner commensurate with the value of their work, at least to such an extent as to relieve the necessities of their several families, thereby proving that republics are not always ungrateful. Government aid, voluntarily tendered at this time, would be acceptable to all of them, for they are all really in need of it. Each of these families ought to receive at least one hundred thousand dollars.

"I propose, then, that the whole medical profession, North, South, East and West, unite in asking Congress, at its next session, to appropriate this sum, as an anæsthesia fund to be divided equally between the families of Long, Wells, Morton, and Jackson.

"One hundred thousand dollars is a small sum to offer where men have sacrificed their lives for the good of the whole civilized world, leaving their families in straightened circumstances. How small this pittance when measured by the benefits these men conferred on the world!

"Let us, as Americans, rise above all party, all prejudice, all sectionalism, and demand of the Government this appropriation for the great work accomplished by these martyrs to science and humanity."

DEATH FROM CHLOROFORM.—Two cases of death from chloroform, administered for anæsthesia in surgical operations, and one to produce sleep, are reported by *British Medical Journal*, as reported by *News and Library*.

Death from this remedy, though rare, occurs sufficiently frequent to awaken some concern for our patients whom we think proper to bring under its anæsthetic influence. Notwithstanding some of the deaths from this cause seem to be the result of a peculiar idiosyncrasy, we have been very much inclined to the opinion that more care in the administration would lessen the number of deaths. It is seldom necessary to induce complete insensibility, and when it is thought advisable to do so, the patient should be gradually brought under the influence, and carefully watched during the process. While some surgeons have almost entirely abandoned the use of chloroform as an anæsthetic, substituting ether, others use it regularly, without seeming to fear any unpleasant or dangerous effects. A mixture of ether and chloroform is used by some, in order to lessen the danger feared from chloroform alone, but after all, may not the idea of greater safety in the use of ether have originated in the fact that fewer deaths are reported, and this without regard to the proportion of cases in which each article was used.

ANTIHYDROPIN.—This is the active principle of the cockroach (blatta orientalis), and is said to be a favorite remedy of the Russians, for dropsical affusions from disease of the kidneys, heart, or other organs.

The powdered cockroach is used in substance, five to ten grains in twenty-four hours, and, unlike cantharades, has no irritating effect upon the urinary organs. The urine and perspiration is said to be greatly increased, and if albumen be present, soon disappears from the secretion.

These facts are gleaned from the *Library*, on the responsibility of an exchange.

We call particular attention to the following notices:

"A meeting of the Provisional Association of American Medical Colleges will be held at the Palmer House, Chicago, on Saturday, June 2d, 1877, at 10 o'clock, A. M. All colleges represented at the meeting of the Association, held June, 1876, are invited to send delegates to the ensuing meeting, and all chartered medical colleges in the United States recognized as "regular" by the colleges already represented in this Association, are also invited to send delegates from their faculties to the said meeting. J. B. BIDDLE, M.D., President."

"The Annual Meeting of The Association of American Medical Editors will be held at the Palmer House, Chicago, on Monday evening, June 4th, 1877, at 7.30 o'clock.

"All medical editors are eligible for membership, and are cordially requested to be present and participate in the meeting. F. H. Davis, Secretary."

Dr. Sussdorf, formerly of Macon, Ga., has removed to New York, where he proposes to practice in future. While we are satisfied that we have lost one very eminent physician, we congratulate our friends of the metropolis on the acquisition of one more star to their already resplendent galaxy of medical talent.

BIBLIOGRAPHICAL.

Atlas of Skin Diseases. By Louis A. Duhring, M.D., Prof. of Skin Diseases in the Hospital of the University of Pennsylvania; Physician to the Dispensary for Skin Diseases, of Philadelphia, etc. J. B. Lippincott & Co., Publishers, Philadelphia, 1877. $2.50 each part.

This is the second part of this very valuable work, and in it is portrayed with life-like vividness cases of *acne rosacca icthyosis* (simplex) *tinia versicolar,* and *sycosis non-parasitica.* The publishers propose in this series of practical illustrations to furnish a means by which the more common affections of the skin may be easily recognized by those whose clinical advantages are limited; and judging by the edition before us we think the publication fully merits the patronage of the profession, and will justify the expectation of its projectors.

The series will be completed in eight, or not exceeding ten parts, issued quarterly, each part containing four plates, royal quarto size, with accompanying texts and explanations.

The enterprise is calculated to remove much of doubt and confusion in diagnosis, and thus supplant the too frequent empirical practice by a rational course of treatment in skin affections. We are of the opinion that no one should be without it, who expects to derive much satisfaction in treating such diseases, and therefore heartily recommend it to the profession.

An Elementary Treatise on Diseases of the Skin, for the use of Students and Practitioners. By Henry G. Piffard, M.D., Professor of Dermatology, University of the City of New York; Surgeon to the Charity Hospital, to the New York Dispensary for Diseases of the Skin, etc.; with illustrations. McMillan & Co., London and New York. 1876.

We have scanned over this work of 375 pages, and are very much pleased with it. The author, after giving a very comprehensive description of the anatomy, physiology, and pathology of the skin, together with a chapter each on symptomatology and diagnosis, enters into a comparison of the various plans of classification of skin diseases. From these—comprising the *lesional* of Pleuck; the *natural* of Alibert, and the *pathological* of Hebra—the author has preferred that of Alibert with modifications, and upon the basis of the etiological or natural relationship of skin diseases, has founded his classification. Upon mature deliberation and extended experience, the following general plan has been elaborated:

I. Diathetic affections.
II. General non-diathetic affections.
III. Reflex affections.
IV. Local affections.
V. Affections of uncertain nature.

The elaborate details, and the illustrations, in connection with the distinct and comprehensive classification, render the work very valuable and acceptable. Students will find in it a treatise easily understood, and practitioners will have much of that obscurity dispelled which the intricate and labored works of old have created. As a book of easy reference, and other conspicuous merit, we readily commend it to the profession.

"**What is the Comparative Physiological and Therapeutical Action of Free Phosphorus and the Phosphites?**" An Essay to which "the Merrit H. Cash" Prize was awarded by the New York State Medical Society, 1876. By Samuel R. Percy, M. D., Professor of Materia Medica in the New York Medical College, etc.

This is a small pamphlet, in which Dr. Percy makes direct issue against the "dogmatic assertions" of Dr. J. Ashburton Thompson, as presented in a late work entitled "Free Phosphorus in Medicine." We agree with the author in the importance he attaches to the remedy, and were very much interested in the details he presents as to its *modus operandi*, and the preparations in which it is most appropriately given.

The pamphlet tells us that Thompson's main objection to administering it in certain preparations is their liability to generate acid, and thereby become particularly deleterious to the system. This the author denies, and asserts, with corroborating experiments, that the lower oxides of phosphorus are therapeutical, and not altogether toxical. While, then, Thompson prefers the free phosphorus, the author regards the lower oxides as free from the dangers pointed out by the former, and also favors the administration of the uncombined drug under certain circumstances.

This is a very interesting subject, and we shall take great interest in its further discussion.

The following have been received, but, for want of space, are reserved for future notice:

CONTRIBUTIONS TO REPARATIVE SURGERY. Showing its application to the treatment of deformities, produced by destructive disease or injury; congenital defects, from arrest, or excess of development; and cicatricial contractions, from burns. By Gurdon Buck, M. D.. Illustrated by numerous engravings. D. Appleton & Co., publishers. New York, 1876.

TRANSACTIONS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. Vol. V. Containing the report of the proceedings for the year 1874, and from January, 1875, to July, 1875, edited by James Tyson, M. D., Hospital Professor of Pathological Anatomy and Histology, in the University of Pennsylvania, etc., Recorder of the Society. Printed for the Society, by J. B. Lippincott & Co., Philadelphia, 1876.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY, for the year 1876. Vol. I. H. O. Houghton & Co., publishers. Boston, 1877.

SOLUTION AND ABSORPTION OF MEDICINES; or, the best means of securing the good effects of medicines in the cure of disease. A paper read before the Tri-States Medical Society, at Vincennes, Ind., November 22, 1876. By J. W. Compton, M. D., Professor of Materia Medica and Therapeutics, in the Medical College of Evansville, Indiana.

EXCERPTA.

Relief of Pain in Uterine Cancer.—Dr. A. E. Aust-Lawrence, Physician to the Bristol General Hospital, writes to the *Medical Times and Gazette*, March 24th:

I have, unfortunately, generally under my care in hospital and private practice, about from twenty to thirty cases of cancer of the uterus, vagina, or rectum; and the experience of the past twelve months has led me to rely, to a great extent, on the following treatment for the relief of pain: In cases of medullary cancer of the uterus, and also of advanced epithelioma in the same region, I have been struck with the marked relief often derived from the administration of ergot, in doses of thirty minims every six hours. There is a relief from the intense throbbing which, as a rule, only subsides with each attack of hemorrhage, which, of course, brings with it great exhaustion. I consider the ergot acts in the ordinary way, by lessening the amount of blood in the uterus; and it may also check, to a slight extent, the rapid breaking down of the affected part. A case of medullary cancer in a young woman, thirty-one years of age, was rendered very much less painful by ergot than by any other remedy which was tried. I have a case now under my care, of sarcoma of the uterus, the pain of which is very much relieved by full doses of ergot.

Another drug I have found of great value is croton-chloral hydrate. This, in my experience, has not very much power to lessen the pain at the seat of the cancer, but it is very valuable in lessening the reflected pains in the back, thighs and groins; and this it has done in several of my cases to a very marked degree. As a local remedy I have found carbolic acid very valuable. I apply it, full strength, by means of a little piece of cotton-wool, through a very small speculum, to the cancerous surface, and then order a lotion with one drachm of the glycerini acidi carbolici to half a pint of water, to be used as an injection night and morning. I have found this drug, used in the way I mention, of great value.

Of course, other drugs suggest themselves to every one, such as opium, Indian hemp, bromide of potassium, etc.; but what I wished to show is that ergot is a very valuable agent in helping to control pain in these cases; that locally I have had better results from carbolic acid than from anything else. I might also add that a very valuable way of relieving pain in these cases is by small blisters in the groins, dressed with an ointment containing morphia.

The Lateral Movements in the Knee-Joint in Cases of White Swelling.—These movements have been ascribed by surgical writers exclusively to alterations in, or destruction of, the peripheral ligaments. M. Moutard-Martin, however, has had opportunities of observing four cases which presented this sign during life, and in which the autopsies showed that the ligaments retained their normal strength, while the cartilages were greatly altered, or even absolutely destroyed. The first case was one of suppurative arthritis, consecutive to osteo-myelitis, and the lateral movements during life were attended by crepitation. The autopsy showed destruction of the cartilages, but the anterior, posterior, and lateral ligaments were healthy; only the accessory fibrous bands which form the capsule presented fungous growths. The three other cases were instances of white swelling, and in none of them was crepitation present during life. In two of these cases the internal surfaces of the capsular ligaments were covered with fungous growths, and in one there was an opening through the internal ligament into the bursa that separated the gracilis from the knee-joint. In all three cases, however, the true ligaments preserved their normal thickness and strength; they were neither relaxed nor softened. On the other hand, the cartilages were either thinned and atrophied, or were softened, ulcerated, and destroyed in part, so that the space between the bones was incompletely filled out. In the first case, both cartilages and fibro-cartilages had entirely disappeared. These changes in the cartilages are quite sufficient to explain the abnormal lateral mobility. In one of the cases the crucial ligaments were still intact. It is quite possible that in all these cases, if life had been prolonged, the abnormal movements would ultimately have produced stretching and disorganization of the true ligaments. If these observations are confirmed by further autopsies, lateral mobility will become an important indication for the production of anchylosis, or for amputation or resection.—*Le Progres Medical*, Feb. 3, 1877.

INSUFFLATION AS AN AUXILIARY METHOD IN SURGICAL OPERATIONS.—The *Revista Medico-Quirurgica*, No. 11, 1876, states that Dr. Moutes de Oca, clinical professor of surgery in Buenos Ayres, has devised a method by which operations are greatly facilitated in regions where Esmarch's bloodless method is impracticable, as, for instance, in the neck. The Professor has employed this method with the most brilliant results in the surgical wards of the *Hospital General de Hombres*, during the past two years, for the extirpation of tumors. The method consists in the insufflation or injection of air into the connective tissue surrounding the tumor, causing, the separation or isolation of the organs, and is performed in the following manner: A trocar is first introduced through the skin into the connective tissue in the vicinity of the tumor which is to be removed, the stylet is withdrawn, and the tube of a pneumatic pump connected with the canula, when two or three strokes of the piston will generally be found sufficient to cause the tumor to float on the distended cells. If the tumor be very large, it may be necessary to insufflate from two or more points. In performing the insufflation we should always take the precaution to compress the tissues at a certain distance from the tumor, in order to prevent the air from passing too far into the tissues. After this preparatory operation is completed, the surgeon cuts the integument covering the tumor with his bistoury, and then terminates the operation with his finger or with the handle of the instrument. "We have often had occasion to be present when the Professor has applied his method, and as often have we been obliged to admire its efficacy, and we cannot but feel amazed at the facility with which operations may be performed by this method. Among the operations that we have witnessed we remember some of great importance, that have proved, beyond doubt, the excellence of the method."—*Med. and Surg. Reporter.*

SYMPTOMS RESULTING FROM ANÆTTHESIA BY ETHER IN YOUNG SUBJECTS.—Dr. Leon Tripier read a paper on this subject before the French Association for the Advancement of Science. He related three cases in which the administration of ether for surgical operations was attended by an arrest of respiration, and though after long efforts at restoration recoveries took place, the patients were placed in a most alarming condition. He also instituted experiments on young cats with ether, and found, as in young human subjects, an arrest of respiration often occurred. Older animals were less liable to this accident. He, therefore, considers anæsthesia by ether in young subjects as dangerous, and that chloroform for them should be always preferred.—*Gaz. Hebdom*, Sept. 25, 1876.—*Am. Jour. Med. Sciences.*

KENTUCKY STATE MEDICAL SOCIETY.—The annual meeting of this Society was held at Louisville, on the 3d of April. Dr. R. W. Gaines, of Hopkinsville, President, in the chair. The following officers were elected for the ensuing year. President, Dr. L. P. Yandell, Jr., of Louisville; Vice Presidents, Drs. J. Dismukes, of Mayfield, and W. B. Rodman, of Frankfort. Frankfort was chosen as the place of meeting in 1878.

Dr. L. S. McMurtry, of Danville, reported that the M'Dowell Monument Fund amounted to $434. Subscriptions were given on the spot, increasing the fund to $1,054.

Dr. Baker, of Shelbyville, offered the following resolutions, which were adopted unanimously:—

Resolved, That this Society is in full accord with the American Medical College Convention, seeking to elevate the standard of medical education in this country.

Resolved, That summer schools, which enable students to graduate after from eight to nine months study, are exerting an evil influence upon the profession.

Resolved, That a winter and summer course by the same school, and graduation at the end of each, tends to deteriorate the standing of the medical profession.

HYPODERMIC INJECTIONS IN HERNIA.—Reporting upon three cases communicated to the *Societe de Chirurgie*, in which strangulated inguinal hernia was easily reduced after the hypodermic injection of morphia, M. Le Dentu observes that in these cases the injections certainly assisted their reduction, but it is doubtful how far they would have succeeded had the strangulation been more decided and of longer duration. If the surgeon is called to the case immediately, the injection may be of use by dissipating the pain and spasm; but if some hours have elapsed, it will be always of less value than chloroform, which enables us to at once recognize whether the hernia is reducible or the operation necessary.—*Med. Times and Gaz.*, April 8, 1877, from *Gaz. des Hop.*, March 31.

ERGOT IN CHRONIC UTERINE CATARRH.—As the operation of ergot given internally is very tedious, and its hypodermic injection is attended with difficulties in private practice, Dr. Goreleitschenko has tried the effect of pencilling the canal of the cervix uteri with solution of ergot (ergotin, 2 scruples; glycerin and distilled water, of each 2 drachms,) leaving the pencil within the canal from one to three minutes. In this way he has treated twenty-nine cases of chronic metritis attended with chronic catarrh. In twenty-two of these the discharge ceased, the swollen state of the mucous membrane disappearing, and the uterus itself being smaller and firmer. The subjective symptoms also ceased, and regular menstruation ensued. In the other seven cases the improvement which ensued was soon followed by relapse, the uterus in these cases having undergone more advanced alterations.—*St. Petersburg Medical Woch.*

ESMARCH'S OPERATION FOR CLOSED JAW.—Mr. Annandale relates, in the *Edinburgh Medical Journal*, a case in which, after necrosis of the upper jaw, permanent closure of the jaws took place. This was remedied by excising a portion of the entire thickness of the lower jaw in front of the cicatrix, and about an inch to the left of the symphisis. By so doing, a false joint ultimately resulted at the point of excision, and the jaws were capable of being separated to the extent of three-quarters of an inch, whereas, formerly they could only be separated the eighth of an inch.—*The Doctor.*

PROF. FRANCIS G. SMITH has resigned the chair of Institutes of Medicine, in the University of Pennsylvania, (Med. Dept.) on account of ill-health. It is reported that other resignations in the same school are imminent.—*Hospital Gazette.*

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THE WATER SUPPLY OF AUGUSTA: THE NECESSITY FOR ITS PROTECTION AGAINST FURTHER AND FUTURE CONTAMINATION.

BEING THE REPORT OF THE "SECTION ON SANITARY POLICE," READ AT THE REGULAR SESSION OF THE AUGUSTA LIBRARY AND MEDICAL SOCIETY HELD AT AUGUSTA, GA, APRIL 27, 1877.

BY WM. H. DOUGHTY, M.D.

Mr. President:

From the title of the section of which this is the first report, namely, "Sanitary *Police*," I shall assume that it was the design of the Society to elicit such action on the part of the reporter as would present the sanitary defects and wants of this municipality, rather than a mere rehearsal of current topics in general hygiene. The practical results to which such a line of duty leads are obvious; for, aside from the interest and pride naturally felt by the profession in the illustration and development of home problems in sanitary science, there is the great end which all should covet, namely, the enlightenment and commitment, if possible, of the public mind to the necessity for and value of sanitary reforms. That it is the desire of this Society that its deliberations on this and all kindred subjects shall be productive of this great good, I shall not question. The subjects pertaining to this section are those concerning which the public intelligence should be thoroughly quickened, since it is the only department of the science within the grasp of the unprofessional community, who, however willing to brave the risks of even the most empirical medication in person, too often prove impervious to all appeals for the correction of evils that prejudice the public health. For *preventive* medicine they entertain a degree of skepticism which accords it the fate of a refined subtlety, and consigns it to the care of theorists, whose suggestions are worthy only of a respectful hearing—rarely of adoption.

Experience shows that in this sphere the authority of the profession is almost a nullity, without the active interest of the civil authorities who represent the people in power. The necessity of the case renders it, therefore, neither unwise nor unprofessional to discuss even before them and for their benefit the problems at interest. So great is the liberty, or rather the license, of the people in this democratic government of ours, they may shut their ears even against professional remonstrance: that they need instruction will be admitted readily. I trust, therefore, that you will not deem it beneath the dignity of this body, nor ascribe it to any mean ambition on my part, if I shall hope ultimately to effect, in part at least, to the honor of this Society, a wholesome revulsion in the public mind upon this subject. Certainly it is a legitimate work, a laudable undertaking. Allow me to say, that if you would obtain recognition and acquire influence as a society with your fellow-citizens, it is at your command, by showing a capacity for promoting reform by useful suggestions, presented in such a manner as to create a public sentiment strongly in favor of their adoption as, perhaps, vital necessities. Efforts at administrative reform are powerless unless approved, if not incited, by a strong public sentiment; and again, executive indifference is powerless to resist a torrent of public feeling forcibly directed against it. Be it our task, then, first to create, if possible, this public sentiment, and then to direct it so forcibly against the abuses that exist as to exact from those in power the reform so greatly needed in the sanitary condition of the city.

In England, sanitary science has the enduring basis of organic law, which provides not simply for a Bureau of Health and Health Minister, so to speak, to enforce its authority upon individuals, but also to compel the performance of sanitary duty by corporate authorities. English enactments are not merely advisory, but compulsory in their operation. By the

"Artisan's and Laborer's Dwelling Act"* of 1875, according to Dr. Fulsom, the "local authorities are not only allowed to tear down buildings unfit for use as dwellings, and to sell the land if the owner refuses to place proper buildings thereon, but, under certain circumstances, they can be compelled to do so by the central authority."

The present I believe to be an opportune moment for pressing the consideration of necessary reforms, as the public mind is predisposed to entertain them; and to their credit be it spoken, the civil authorities have already taken a step forward by a re-organization of the Board of Health. I shall endeavor, in the discharge of my duty, in presenting serially the several important subjects connected with the local administration of the laws of hygiene, to keep in view such considerations as will lead to recommendations of practical value by this Society to the Board of Health and civil authorities.

The subject to which I invite attention this evening is, the "Water Supply of Augusta; the Necessity for its Protection against further and future Contamination."

The study of the geography of disease indicates conclusively the great fact, that the proportion of diseases and deaths due to climatic causes is largely exceeded by those of artificial, or social, origin—a significant comment, and, at the same time, a terrible satire, upon what is complacently called the *civilization* of mankind. This fact, generally admitted, propounds, for solution, the most difficult problem in sanitary science. It is this: Conceding that certain inherent difficulties attach to the formation of communities of people, with their varied industries and geographical locations, how can the greatest possible immunity to society be secured from the evils incident thereto? It contemplates that prejudicial influences be reduced to the minimum degree of activity, while wholesome ones are given the widest scope. Latter-day observation shows, for the encouragement of the philanthropist and sanitarian, that most of the evils, of a social origin, that afflict society, are preventable; and, upon this basis, the superstructure of *preventive* medicine has been raised.

Between the individual citizen and the community of citizens there are reciprocal relations, duties and obligations. The more the latter—the great body politic—can be individualized, and brought to mind as the immediate neighbor, citizen, friend, and even guest, of the former, the clearer and more practical will be the perception of the mutual responsibilities involved in this relation. If this abstract view generally obtained, it would be safe to declare that public health is the sanitary complement of individual health. Unhappily, the representative public, whom I have characterized as every man's neighbor and friend and guest, is too often recreant to duty to enjoy so great distinction. The proffered salutation of the latter is not seldom met with tainted breath, polluted drink and tarnished garments.

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* See the Seventh Annual Report of Massachusetts Board of Health, 1875, page 289.

The purity of the "air we breathe and of the water we drink" is too often, in its keeping, lost or impaired to a degree sufficient to make the equivalent of so much poison to the unconscious consumer. Next to cleanliness, the condition of the atmosphere and the water-supply of cities constitute the most important themes of the sanitarian. It is difficult to say which should take the precedence, although it may be assumed as an axiom in science, that, in proportion to the opportunity for, and consequent degree of, contamination of these elements of healthfulness, in any given place, in a similar proportion will the foot-prints of disease be the more clearly marked. Infected air and infected water are equally hurtful. Observation proves that the water supplied to cities and towns for drinking purposes, is a frequent inlet to endemic and even epidemic diseases—cholera, typhoid fever and other epidemic disorders have been but too surely traced to the foul water furnished to portions of populous cities thus scourged.

To every city, having a specific water-supply brought perhaps from external sources, as rivers, ponds or springs, an inquiry into and constant watchfulness over its purity are by no means superfluous.

How then is Augusta supplied with water? and whence the danger threatening its purity?

Augusta is supplied with water for all purposes from three sources, namely:

1st. *Pumps* within its limits, and chiefly on the suburbs.

2d—The Turknett Spring.

3d—From the Savannah River, via the *Augusta Canal*.

I shall notice them in the order in which they are mentioned.

PUMP WATER.

There are now 118 pumps within the city limits, although situated chiefly in retired localities and on the back streets. This water was originally very pure, indeed all that could be desired; cool, palatable and pure, free from organic and inorganic impurities, it compared favorably with that subsequently supplied by the Turknett Spring. Even now new and much-used pumps in certain localities, afford wholesome water in every sense, so refreshing and cool in the summer season as to enable the population dependent upon it to dispense with ice.

These pumps vary in depth from 14 to 30 feet, the natural purity of the water being clearly foreshadowed by the geological arrangement of the soil upon which the city is built. As far back as 1860, Prof. Joseph Jones, now of New Orleans,* after a thorough investigation of the subject, remarked that "an examination of the strata upon which Augusta rests, shows that there is no cause of contamination in their chemical constitution; its soil being composed of alternate layers of sand and clay, with coarse sand and pebbles for 75 feet, and rests upon the primitive non-fosiliferous rocks."

But such were the alterations in the character of this water due to the absorption and percolation of surface water, and lime used for disinfecting purposes, this able chemist, after repeated analyses of water from pumps, then much in use, declared it the equivalent of the "drainings of graveyards," the difference being rather that of quantity than quality of the constituents. Furthermore, having specified the sources of pollution, most of which still exists to taint the atmosphere and saturate the soil, as numerous cesspools, earth-pits, open sewers with imperfect drainage, requiring the liberal annual distribution of lime in the streets and premises, not forgetting also, that then as now, the city was one vast but beautiful pasture, he adds: "we have then in the city of Augusta, the same arrangement employed by the manufacturers of nitre from manure and lime and urine," (page 293.) Since 1860, manifest improvements have been made, particularly in the substitution of covered brick drains for those unsightly central ditches that formerly marred the appearance, as well as promoted the uncleanliness of the streets. It is feared, however, that, in the absence of an established system of sewerage to the completion of which all forward steps should look, the improvement is not altogether real—the contents of said drains being simply hidden or removed to other localities out of sight, it is true, but not beyond hurtful limits. With this view of it, it is no figure of speech to say, that the beautiful characters of our city do not relieve it from the imputation of being essentially, intrinsically, a mine of filth, needing on favorable occasions, the explosive spark alone to precipitate pestilence. Last fall when we stood upon the very threshhold of this disaster, a condition of filth was brought to light, frightful to contemplate, in the light of possible consequences.

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* First Report to Cotton Planters' Convention of Georgia, page 291, 1860, by J. Jones, chemist.

Just here, allow me to say that the same causes that have contaminated the soil, and the water derived from it, have operated in other, and perhaps equally hurtful, directions. Where their effects could be made so palpable, they have led to the abandonment of the pumps at large; but, without doubt the risk has been and still is, equally great, so far as the air we breathe is concerned. Undoubtedly, the atmospheric contamination has kept pace with that of the water, and, but for the instability of the air, and the agitation to which the kindness of nature subjects it, would have, long since, been converted into a vortex of disease to engulf the people. Unhappily, there is no resource for the substitution of a more wholesome atmosphere, as in the case of water, except by devotion to that reform which looks steadfastly to the *prevention* (not removal) of *filth*, as the sole duty in the premises. This has never been done, and, I fear, never will; for, as long as our citizens are not made sensibly, and painfully, to realize the vitiation of the local atmosphere, they will remain content with an imperfect drainage and associate sources of pollution. The plea of economy and poverty is ever urged against the employment of a true sanitary reform, which only conserves, when wisely instituted, the real wealth, happiness and health of the population. Defective drainage stands at the head of the evils that afflict this, otherwise, well-ordered community, retaining, as it does, upon, or near, the surface, and that in a retentive soil, materials favorable to rapid decomposition, and promoting great humidity of the soil and atmosphere, especially in the winter and wet season, when the water level* is not far beneath.

As there are a few pumps in the interior still in use, I give the following analyses, made by Professor Jones, selecting the best and worst of them, in order that you may estimate the degree of pollution and the unwholesomeness of all present pumps similarly located. It will be observed that the analysis gives only the character and amount of mineral substances held in solution:

Analysis 56—*Pump-water, intersection of Broad and Washington Streets—September* 10, 1860.

100,000 grains contain:

Solid residue	43.642
Nitrate lime	17.280
Chloride calcium	3.995
Sulphate magnesia	3.315
Chloride magnesia	8.273
Chloride sodium and potassium	6.107
Nitrate sodium and potassium	1.060
Chloride ammonia	0.397

Analysis 54—*Pump-water from intersection of Centre and Greene Streets—Sept.* 10, 1860—*Hot and dry weather.*

100,000 grains contain:

Solid residue	78.972
Nitrate lime	32.400
Sulphate lime	0.181
Chloride calcium	12.562
Nitrate magnesia	7.525
Chloride magnesia	10.749

If we add to this, the possible and probable organic impurities to be found, I think, Mr. President, it would be in order for this society to recommend to the Board of Health, the condemnation of all pumps ascertained by chemical examination to approximate the above.

TURKNETT SPRING WATER.

That splendid fountain, Turknett Spring, located on the south side of the Sand Hills, about two miles from the city, to the south-east, furnishes water almost as pure as crystal, and nothing but the insufficiency of the supply and the great expense incident to maintaining it, could have reconciled our citizens to its withdrawal. It is almost as pure as distilled water, its specific gravity being 100.007. (Report before cited, page 206.) It contains 4.14 grs. solid residue to every gallon, or 6½ in 100.000 parts.

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* This sometimes approaches within twenty inches of the surface.

It is conveyed by pine logs with iron connections to the reservoir at the upper end of Broad street, and is thence similarly distributed over the city, the sources of contamination, being within the line itself, i. e. from the destruction and decay of the logs and the oxidation of the iron joints, and also from the penetration of defective logs by offensive organic fluids. Prof. Jones says that the "reddish brown sediment which is drawn from the pipes of this system is formed by the action of the water, atmospheric air, and carbonic acid upon the iron joints of the logs."*

Since the introduction of the river water, the number of hydrants furnishing this water, has been greatly reduced, the city government placing upon them a high tax ($20.00) with a view to compelling its discontinuance by the citizens. If the river water could be subjected to complete filtration, and preserved against external sources of contamination as readily, we might cheerfully surrender the former for the more convenient and abundant supply of the latter, since, in point of chemical purity, the proportion of *mineral* matter held in solution is almost the same as will presently be seen.

This is due to the fact which Prof. Jones has pointed out, that the waters of these two streams have a common geological source, namely, the primitive regions of Georgia, and other points northward. Those then who adhere to the spring water, under the apprehension that they get a purer water than that of the river, except as to *suspended* matter (clay, etc.) deceive themselves. River water filtered for the removal of the latter is quite as pure and equally wholesome, provided its pollution from surface-water and sewage be prevented.

The City Tax Digest shows that there are now 254 hydrants subject to taxation.

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* See "Report on Kaolin Pipes and Turknett Spring water," to John Davison, Esq., Member of Council and Chairman of Augusta waterworks, 1860.

RIVER WATER.

The supply from this source is obtained directly from the first level of the Augusta canal, which taps the river seven miles above the city, bringing within the reach of its industries, its sanitary and domestic requirements a volume of water equal to all prospective demands. It is a comfortable reflection to know that, while the city, since the enlargement of the canal, has at its disposal 14,000 horse-power for promoting the industrial enterprises so vital to its future growth, it also has at command the means of supplying, without stint, or detriment to them, a volume of water equal to its internal purification, even to absolute cleanliness. This cannot, perhaps, be said of any other city in this country.

In the plan of the Augusta water-works it is drawn from the first level in the vicinity of the Granite Mills, (now the Enterprise Manufacturing Company) into what is known technically as the "Receiving and Settling Basin"—thence it passes into or through the "Filtering Basin" into a "Clear Water Basin." Having thus been prepared and crudely filtered, it is conveyed by pipes to the "Pump House," near the third level of the canal, where, by means of a water and steam pump, it is forced into a reservoir, ninety feet high, and having a capacity of 160,000 gallons. Here the pressure is obtained that determines its distribution to the whole area now supplied. These pumps are capable of furnishing about 3,500, 000 gallons per day, which is actually done in the summer months.

Now then, between the point of supply for the basins and that of distribution, no opportunity for the pollution of this water is afforded; not even those, bent on malicious mischief could effect its pollution, as the city provides a watchman at the basin as well for this as other obvious purposes. The purity of the supply to the city then depends upon the condition of the water drawn directly from the canal, there being no opportunity for subsequent contamination; the purity of the canal-water depends in turn upon that of the Savannah river, and of the streams that contribute to its volume between the locks and city.

Fortunately, I am able to present an analysis of the Savannah river water from the hands of the same indefatigable chemist, Prof. Joseph Jones, whose love of labor knows no bounds, and whose accuracy none will question. It gives me pleasure to refer to his labors at a time when it is hoped they are to be used for the practical benefit of our people.

Analysis 32—*Savannah River water opposite the city of Augusta—September* 10, 1860—*Water unusually low—The season has been hot and dry.**

Suspended matters in 100,000 grains, grains 5. The suspended matters are much less than in wet seasons, when the red clay is washed down. These suspended matters were found, under the microscope, to consist of particles of black and white mica, fine silicious sand, minute particles of different non-fossiliferous primitive rocks, animalcules and clay colored red by per-oxide of iron. One hundred thousand grains of water, after the removal of the suspened matter, contained:

Solid matters	4.2936
Carbonate of lime	0.7544
Carbonate of magnesia	0.0250
Sulphate lime, chloride lime, chloride magnesia, and phosphate lime—slight traces.	
Chloride sodium	0.0436
Sulphate soda and potash	0.0489
Silicic acid, silicate alumnia, potash and soda, together with a small proportion of organic matter, and traces of ammonia	3.1210

Making due allowance for the varying proportions of insoluble suspended matters, particularly the red clay, that immediately arrests attention in wet seasons, the Savannah River water is as pure and wholesome drinking water as can be desired, comparing very favorably with the best springs of the State. Properly filtered, it is as clear to the eye as the Turknett Spring water, although the filtration to which the authorities subject it is scarcely worthy of the name—the clay precipitate being ever present, and sometimes to such a degree as to make it a distasteful draught, which not even a julep could redeem.

Until very recently, there can be no doubt that the water of the Augusta canal was as pure at its point of delivery as at its river head; there were no proper sources of contamination, along the seven miles of its course. Even now, that which I shall proceed to point out as the great source of future pollution is not a felt-injury, although active on a small scale. It is to the future evil that rises in magnitude with the lapse of time, and *pari passu* with the prosperity of the manufacturing interests of the city, and its consequent growth in population, to which attention will be called.

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* Page 252 Jones' Report.

During the speculative era of which the present financial and commercial depression is the natural sequence, and after the recent enlargement of the canal was actually begun, a corporation, known as the "Augusta Land Company," was organized, which, with the aid of even foreign capital, purchased a large body of land west and south of the canal, between the Summerville Railroad on the south and Washington Railroad, on the north, and extending from Bohler's property, on the east, to the foot of the "*Hill*," on the west; in all, about 370 acres. On the extreme northwest, this purchase extends, I believe, quite to the mouth of Rae's Creek, where the latter amplifies into Lake Olmstead. Under the apprehension that the prospective construction of cotton and other factories (which, under the stimulus of unnatural dividends by the factories then in operation, sanguine individuals already descried in the near future) would greatly enhance its value, this company proceeded to lay the foundation for and invite the future extension of the city to this point.

Maj. J. J. Gregg, a highly public-spirited citizen, was its first President, and, with characteristic ability, he devoted himself to the preparation of this tract for future annexation. At that time much of it was a low, marshy, malarial area, so flat that the natural rainfall was often retained for days upon the surface. The first step towards utilizing it, after surveying and laying off its streets to correspond as nearly as possible with the principal streets of the city, was the adoption of a drainage system complete in its operation. Through the magnificent street, Crawford avenue, that faces the Scheutzen Platz, there runs a splendid brick underground sewer, into which the tributary sewers (surface and otherwise) empty their contents. With some exceptions, the drainage of the entire slope of the Sand Hills, on this part of its eastern exposure, finds its way into this sewer, which has its outlet, after crossing Washington road above the "Beverly Walker" residence, into the first level of the canal, whose south bank, at this and sundry other points along its course, is formed by the hillside, and not by an embankment.

Near the outlet of this sewer, a surface stream of apparently clear water from the hillside, more directly embraced in the Milledge tract, also empties; but as the latter has been surveyed, Greene street being continued to the highest point of the hill as marked by the symmetrical rows of trees, it too will sooner or later become an objectionable sewer, gladly availed of for purifying the hill-sites, but bearing polluted water into the canal.

The effect of this skillful drainage has been to recover this property from all objection on the score of unhealthfulness that heretofore attached to it. It may be truthfully said to be better drained than any portion of the city proper. Within the latter there is no system above or beneath the soil; it is all irregularity and insufficiency, while there the system only requires occupation to complete it. Its perfection is secured by providing for the continuous irrigation, if need be, of the principal sewer, by dividing the volume of water that flows from Heckle's spring, and thereabouts, one-half being turned directly into it, while the other traverses an open gravel-bed sewer, to become converted into a brick subterranean drain in the future. This is precisely what I endeavored to impress upon the Board of Health last year as a necessary practicable measure for portions of the city east and north of the third level of the canal. Continuous irrigation of the principal sewers is the beau ideal of sanitary precaution against localized filth, and, if possible, should be engrafted upon the water-carriage system of every city seeking its supply from external sources.

Now, Mr. President, if you enter the southeast corner of this property, and survey the extensive water-shed formed in part by plain and hillside, at the same time anticipating the future, so far as to behold this occupied by a population of from 5,000 to 8,000, you can then forecast the probable risk of contamination to the water of which you and I are to drink. The filth of the streets, wet waste of every kind from dwellings, sewage combining excreta of man and animals, all seeking outlet in that stream from which the city draws its supply of water for drinking and cooking.

But this is not all. I read from a pamphlet prepared by Mr. B. Holley, C. E.,* in 1875, under the direction of the Board of Managers of the Augusta Canal, as follows:

"The company also own, on the opposite side of the canal, a tract of land extending from the Washington road nearly to Rae's creek, containing ninety acres, exceedingly well located for the use of operatives. This land will be sold at very low rates."

This tract is opposite to the old "Powder Works," and forms part of the hillside, the slope being towards the canal and the sewers before spoken of, into which the sewage of the factory population, who are to find homes at this point, must be carried. The best factory sites, beyond the city limits, are found in this vicinity, and it is altogether likely that these ninety acres will be utilized for factory residences. Already a factory of 60,000 spindles is spoken of for this point, which gives seriousness to the probable injury likely to be felt in this direction. The Augusta Factory has a population, made up chiefly of the families of the operatives, of quite three thousand, so that from one factory of twice its capacity, or several aggregating this, a population of perhaps 5,000 may be expected. Adding this to the estimate for the Land Company's area, it will give a total of perhaps 10,000, the sewage of whose streets and premises must be thrown into the canal beyond possible neutralization, escape by filtration or other known means.

Assuming an increase of population equal to this in twenty years, which is a short time in the history of a city, and a generous offer to those who defend this magnificent speculation by appeals to the future, one-third of its sewage will then be incorporated in the water supply to the balance.

This is no chimera; it stands before us as a prospective reality, tangible in form and terrible in its consequences. Nothing we eat or drink could escape the pollution. Not a milk-maid could wash her pans or pails and escape the evil; the refreshing beverages of the summer would contain a due proportion of diluted sewage; the water tendered the fevered sick would contain possibly the germs of the disease from which he already suffered; all, all, of whatever class or condition, must drink it, and take the consequences, whatever they be.

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*The Enlarged Augusta Canal, etc. By Byron Holley, C. C. 1875.

When this state of affairs is ushered into existence, with the progress of time, having in reality made a *sewer* of the medium of our supply, we drink nothing more nor less than sewage in different degrees of dilution. If compelled to use it, let it be "frankly recognized as unclean."*

Mr. Simon's remarks on this point are so apposite that I shall give his own language. "Regarding rivers as sources of drinking water, one of two positions ought, I submit, to be consistently aimed at; either that, being a necessary source of domestic water-supply, the river shall be absolutely protected against pollution; or else that, being (in whatever degree) used as a sewer, it shall be classed as not fit to supply drinking water."

The importance of timely action in this matter will be appreciated by the announcement that *when once contaminated with sewage to a sensible degree there is no known method of purification for safe use.*

In order that this may be set at rest, I shall cite the opinions of the most recent authorities. In the Seventh Annual Report of the Massachusetts Board of Health, for 1875, page 298, Dr. C. F. Fulsom, remarks: "No authoritative body, so far as I have been able to learn, has declared itself as fully satisfied with any other process for the purification of sewage than that of *irrigation,* that is, its application to and absorption by the soil, the action of which is not "simply mechanical;" it is chemical also, for the results of filtration, properly conducted, are the oxidation, and thereby the tranformation of the offensive organic substances, in solution in the sewage stream, into fertilizing matters which remain in the soil, and into certain harmless organic salts which pass off in the effluent water," (page 326.)

"Much indeed, he adds, has been said as to the complete self-purification of rivers by a flow of a few dozen miles. No such power exists. The solid parts are deposited, and *what remains looks clear and bright, especially when largely diluted.*

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* "Filth Diseases and their Prevention," by John Simon, F.R.C.S., Chief Medical Officer of Privy Council and of Local Government Board of Great Britain, page 84.

Chemical changes take place too, sometimes decomposition, sometimes putrefaction, sometimes simple elective combinations. *If sewage contain the "germs" of disease, whatever they may be, no agency at present known, except a sufficiently high temperature, will efficiently destroy them; "this was the unanimous decision of the International Medical Congress at Vienna, in* 1874." "*Excessive dilution simply diminishes the chances of danger from any particular tumblerful,* (page 283.)

There is no hope then, Mr. President, either by chemical, mechanical or other means of purifying the stream whence this city derives its supply of drinking water, when the contamination foreshadowed has been brought about. To face this fact is sufficient apology for the details of this paper as well as for seeking to make it public. Let our citizens be made aware of this fact, so hurtful and so fatal to their individual welfare, and, forewarned, insist upon its *prevention,* now so easy, which is the objective point of this paper. Lest I fail to provoke that interest of alarm necessary to the latter, I will submit the following extract from Dr. Simon, on the subject of "infective water," *i. e.*, water charged with septic ferment, the prolific cause of endemic and epidemic diseases:

"In infective water, as in infective air, the zymotic (fermentated) malignity is but indirectly, and most imperfectly suggested to us by qualities which strike the common sense, or by matters which chemical analysis can specify. As any unbrutalized sense of smell will turn, with disgust, from certain airs, so will it and common taste and sight, be repelled by certain waters; and, as the chemist can show certain foulnesses in the one, so he can show certain foulnesses in the other; but these tests, it must always be remembered, are tests, only, of the most general kind. Confessedly they do not touch the *corpus delicti,* but only certain conditions to which it is, or may be, collateral; and their negative findings are, consequently, not entitled to the same sort of confidence as their positive. Chemical demonstration of unstable nitrogenous compounds in water is a warning which, of course, should never be disregarded; but, till chemistry shall have learned to identify the morbific ferments themselves, its competence to declare them absent, in any given case, must indirectly be judged incomplete, and water which chemical analysis could, probably, not condemn, may certainly be carrying in them very fatal seeds of infection." (Pages 19 and 20.)

These ferments, or septic germs of disease, are literally unknown, except by their consequences. Cholera, typhoid fever, and other diseases of like character, have a portable poison, or germ, which, according to professional opinion of the present day, is taken, most likely, with infected water; these, and other sources of danger, are beyond the eye of the microscopist, the reach of the chemist, or other tangible method of separation and identity. They belong to the sphere of the unseen, (but not unfelt) parasitic world around and about us, which is as yet an impenetrable mystery, just enough being dimly recognized of its outlines to confuse. That a way of successful approach, in the further progress of knowledge, will some day be opened up, I doubt not. Meanwhile, so far as the water we drink is concerned, our only safety is found in preventing consequences, as far as may be, by *excluding all possible sources of contamination.*

By way of enforcing much that has been said, even at the risk of repetition, I will submit the following extracts from the Seventh Annual Report of the Massachusetts Board of Health.

"The opinion of the English Rivers Pollution Commission was very decided on the subject of the use of polluted water," (1868.) "No process has yet been devised of cleansing surface-water and water contaminated with sewage, so as to make it safe for drinking." And, again, "among the numerous processes for the cleansing of polluted water, there is not one sufficiently effective to warrant the use for drinking of water which has once been contaminated with sewage or other similar noxious animal matters."

"If this view of the case may seem to be over-cautious, it is to be remembered that the poison, however trifling, is taken daily, and that although when in robust health, the individual will not suffer from it, it may be sufficient to make itself felt when he is prostrated by sickness and his powers of resistance to such influence are then proportionally impaired," (page 44.)

Again, "a water supply, whose quality is *somewhat* deteriorated by the constant admixture of sewage, but not to such a degree as to lead the chemist to *condemn* it, or to cause distinct disease or increased death-rate among its consumers, may, yet gradually and insiduously lower their vigor, so that when the time comes, as come it must in the case of streams which receive sewage from privies and water-closets, that some of the above mentioned evacuations (cholera and typhoid fever) enter a water-supply, the zymotic poison than conveyed to the damaged constitutions of those using it, will find them prepared to yield to the morbific influence, as the feeble and sickly everywhere succumb to disease which stronger and healthier constitutions resist successfully," (page 118.)

Again, in a report of a Medical Commission, composed of Drs. Swan, Wood and Bowditch, to the city of Boston, "upon the sanitary qualities of the Sudbery, Mystic Shawshene and Charles river waters," in 1874, the following memorable reference to this subject is made. "The water-supply should be uncontaminable by drainage. There is no demonstrable safety in a middle course. No one has conclusively shown that it is safe to trust to dilution, storage, agitation, filtration or period of time for the complete removal of disease-producing elements, whatever they may be. Chemistry and microscopy cannot and do not claim to prove the absence of these elements in any specimen of drinking water. They discover pollution; and pollution is somehow intimately associated with the production of certain diseases. Our germ, fermentation and other theories indicate our actual ignorance of the ultimate nature of that cause or those causes whose action we nevertheless rightly infer. These deductions from the observation of cases and their surroundings have been so often repeated that we cannot afford to disregard them. Chemistry in these cases has been invaluable in pointing out the fact and source of contamination but it has not indicated the quantity and quality of the specific cause," (page 231.)

The enormity of the offense against decency and the cleanly instincts of human nature, to say nothing of sanitary science, by the permission of the forthcoming evil, may be forcibly illustrated by figures—a very tangible as well as useful method to those who may be disposed to regard its presentation as a future problem as over-strained and perhaps out of season. A population of 10,000, such as we have pre-figured, according to the most available physiological data within my reach, would yield annually quite 500 tons of manure, which, if promptly discharged into the canal, would give nearly 3,500 pounds daily. If we add to this the night-soil of the streets, household and kitchen slops, everything indeed that can be included in the "wet-waste" of households, then the curtain is raised upon a contingent of filth shocking to contemplate, much less to risk.

Such, Mr. President, is the future outlook to one who would guide the footsteps of his fellow-citizens by the teachings of science, by enlightened experience, as well as by the instincts that prompt to self-preservation. Happily, the diversion of the sewage under comment is an easy matter at present, and involves no injury to important interests. The Augusta Canal is the opening bud of promise for this city, and even now the harvest of the future is within sight: the key to its increase of population and growth in commercial importance as a manufacturing centre, let it not become the inlet to that worst enemy of municipal progress, endemic and epidemic sickness. The reputed healthfulness of Augusta is a part of the capital employed to attract those given to manufacturing pursuits. "Health is wealth" in an important sense, both to capital and labor. In the effort to attract and secure the latter to build our waste places and restore the lost fortunes of an impoverished people, let us retain that part of the means necessary to our recuperation that a beneficent Providence has vouchsafed us, namely, the assured conditions of health as embraced in the supply of pure water—pure as it falls from the heavens and issues from the everlasting rocks.

In conclusion, Mr. President, I offer the following resolution.

Resolved, That the Augusta Library and Medical Society respectfully call the attention of the City Council to the circumstances threatening the water supply of the city, and recommend such legislation on their part as will effectually prevent its further or future contamination.

THE NEW CHEMICAL NOMENCLATURE.

BY J. H. LOGAN, A.M., M.D.,
Professor of Chemistry in Atlanta Medical College, Atlanta, Georgia.

Whatever the theory of a science may be, it must necessarily shape, more or less, its nomenclature. Hence the familiar use of the phrase, "the new nomenclature," to designate, par excellence, the new chemistry.

Yet it is a remarkable fact, though still not popularly recognized, that nomenclature in the new chemistry, has passed into COMPARATIVE insignificance. Why this has taken place will be explained in due time.

The popular opinion, as regards the notable revolution, or advancement, which chemistry has recently undergone, and the complexities, real or imaginary, with which it has invested the science, would be much more fully and truthfully expressed under the name of the *new notation,* than by that of *new nomenclature,* for that in connection with the novel and important theories of QUANTIVALENCE, and SUBSTITUTION, has been the real source of trouble and perplexity to students of the new books, and of confusion, worse confounded, to physicians and pharmaceutists of the old school.

Upon those who were even experts in the old forms of the written symbols and formulas of the science, it fell like the sudden sound of the barbarous jargons, heard for the first time around the tower of Babel.

It will be my aim in this brief paper, to shown first, that what is called, the New Nomenclature, is not younger than nearly one hundred venerable years, and that what is thought to be novel in it, is nothing more than a rehabilitation or simplification of all that was vigorous and admirable in one of the most perfect systems of nomenclature the world ever saw. Second, to show that when this nomenclature fails, or falls short, its place is supplied by a still more comprehensive and admirable system of notation, and that whenever this seems to present perplexing difficulties, they may be traced partly to the impatience and injustice of prejudice, and partly to the nature of the subjects embraced in the discoveries of an aggressive and rapidly advancing science.

The old nomenclature, and that which still presides over the fortunes of chemical science are identical, and it is the very same system that was devised and put in operation in 1787, by a committee of the French Academy of Sciences, at whose head were Guyon, and the celebrated chemist, Lavoisier.

At that time, and as it came from the hands of those able men, it was unsurpassed, except in the exact sciences, as a system of terminology. Despite some serious faults, its merits were universally acknowledged, and the valuable results, which it has achieved since for the science, are demonstrative proofs of its great practical value.

Whatever simplifies a science, elevates and advances it, and if this can be claimed for the new chemistry through its recently modified nomenclature, it will be sufficient to show the fact, in order to give it a new and favorable character in the popular regard.

But it has done more than merely simplify; it has corrected in good part, the evil tendency of the false dualistic theory of Lavoisier, and his co-laborers, at the same time adapting itself to the advanced theories of the science, and in some part, even to the novel and extraordinary developments in the dominion of organic chemistry.

The French chemists of 1787 crowned oxygen as the great leading, central figure of chemical art and science. Theirs was the chemistry of oxygen, and this ruling idea gave both form and character to their nomenclature. Oxyge nhad chemical affinity for every other element, save one; oxygen entered, as prominent factor into the generation of nearly all the most important acids, and displayed, in the act of its numerous combinations, an energy and brilliancy which elicited the involuntary homage of both scientists and people. Oxygen was KING.

But like his great contemporary, King Cotton, of the agricultural section of the United States, ninety years of experience and development were too much for the stability of his throne; the logic of circumstances, most of all, of rapidly unfolding scientific phenomena, overwhelmed him, and no charming priestess cheered by her presence and the pomp of ceremonial rites his passage to a lower seat.

In the new chemistry hydrogen is KING. And, like true greatness, but unlike oxygen, it passed up to its new honors without a formal coronation, or even a flourish of trumpets. Its claims had become numerous and urgent.

Hydrogen is the lightest of all known substances; of all the elements, hydrogen possesses the most intense CHEMISM; hydrogen is the great standard of density, of atomic and molecular weight, of molecular volume, and chemical quantivalence; and, last, but not least, HYDROGEN, and not oxygen, is the universal acid generator.

Given the scientific facts of the new chemistry, and deduct ninety years from the era, and what is now known as hydrogen, might have been denominated oxygen, and the latter element, with propriety, could have been named hydrogen, for an invariable product of all ordinary combustion is water, and all ordinary combustion is but the combination of oxygen with the burning substance.

A change so complete as this, would, in government, be revolution; in chemistry, it required such a modification of the entire system of nomenclature as would adapt it to the new condition of things.

The situation and the problem before modern chemists, were simply these: first, The youth had outgrown his clothes—his healthy, vigorous proportions had expanded far beyond the protective capabilities of the garb given him by his illustrious father; second, What is the remedy? for it will not do to allow the boy to go about thus neglected and half naked.

And, if it is decided to give him another decent suit, how shall it be done? Will it be best to patch up the old, outgrown clothes, or to cast them away entirely, and put upon him a wholly new outfit? There were insuperable difficulties to the last proposition.

The old dualistic system of Lavoisier, imperfect and false, as it had been from the first, in theory, had become so encrusted, as it were, upon the forms and expressions of the science, and, withal, possessed so many admirable excellencies that it was impossible to throw it wholly aside for another, even though it were seriously attempted.

To patch the old system, and make the best of it, was, therefore, the only practical answer to the problem. And this is precisely what was done.

One of the first steps taken towards reforming the old nomenclature, was, to yield some of the arrogance of its pretensions to the superior capabilities of notation. Long after the death of its great author, it continued to aspire to a sort of universal dominion over the science of chemico-physics. Nothing was too complex for its methods, or too subtle for its flexibility.

Its self-conceit was akin to that of the famous painter, who boasted that he was able, with his facile brush, to give expression to any conception ever embodied in words, till reminded by another that Job has clothed the neck of the war-horse with STRENGTH and THUNDER.

It assayed to express, in convenient, euphonious language, the most complex molecules, and was ambitious of popular favor, even while elaborating such useless barbarisms as follow: $H_2 Na P O_4$, Dihydric-sodium phosphate, $Na_2 B4 O_7$, Disodic-tetraborate, $H Na_2 P O_4$, Hydric-di-sodium phosphate, and $H_4 Ca (P O_4)_2$, Tetrahydro-calcio-di-phosphate.

It was this pedantic jargon, with other facts, now quite apparent, which first gave evidence of inherent weakness in the system, and when, at length, the later investigations in the domain of organic chemistry, opened wide the flood-gates to endless compounds of teeming atoms, the pressure became too great for any mere pretension, and concession and reform were the order of the day.

The next commendable improvement of the system was its reduction to a form more simple, convenient and consistent, as a whole. This is seen in the fact that a simple principle and rule are made sufficient for its constitution and authority, while a few modifications of the same rule extend and complete its application.

Lavoisier, himself, laid down the principle, to-wit: THAT THE NAMES OF ALL COMPOUND MOLECULES SHALL BE DERIVED FROM THOSE OF THEIR CONSTITUENT ATOMS. The rule may be stated thus: PLACE THE NAME OF THE POSITIVE CONSTITUENT FIRST, AND AFTER IT THAT OF THE NEGATIVE WITH THE ENDING IDE. This is applied primarily to binary compounds, but with a few simple changes, as regards the terminal ide, this rule is made applicable to every compound, whether acid, base, or salt—ternary, or quarternary molecules.

A simple rule, therefore, and a homœopathic pill box collection of prefixes and suffixes, constitute the entire outfit of the new nomenclature. The prefixes are per, hypo, di, bi, tri, tetra, penta; the suffixes, ic, ous, ate, ite, ine, yl, ide. By the old system, a name was written in one order and read in another. FeO was so written, and read PROTOXIDE OF IRON; now, to be more simple and consistent, it is written and read in the same order, FEROUS OXIDE, and without the old prefix pro $Fe_2\ O_3$, sesque oxide of iron, or the per oxide of iron, of the old, is simply FERRIC OXIDE of the new. The prefixes, sesque, proto and deuto, are obsolete.

For the sake of euphony, and also to secure the advantage of a universal language, adjectives are used formed from the Latin names of the positive elements of compounds. $Ag_2\ O$, is argentic oxide; $Pb\ O$ is plumbic oxide, and $Sn\ O_2$ is stanic oxide.

If the same element forms with oxygen two compounds, the suffix *ic*, is used for the higher oxide, while the terminal *ous*, designates the lower.

Thus $Fe\ O$ is Ferrous Oxide; $F_2\ O_3$ is Ferric Oxide; N_2O is Nitrous Oxide; and $N_2\ O_2$ is Nitric Oxide.

When, in any case there are more oxides than two of the same positive element; or if there be any inconvenience in the use of the adjective ending *ous*, they are distingushed by the Greek numeral prefixes; di. tri. and tetra; $N_2\ O_3$ is Dinitric Trioxide; $N\ O_2$ is Nitric Dioxide; $N_2\ O_5$ is Dinitric Pentoxide.

It is no small advantage, moreover, gained by these numeral prefixes, that they extend the principle of Lavoisier, by giving in addition to the names of ingredients, clearly and easily, and within a large range, the exact proportions of each in any compound.

The old prefixes sub, proto, and deuto were a constant source of misapprehension to the student, for it was difficult for him to see why, and to remember, they did not refer to the number of atoms supplied by the negative ingredient, but designated only a certain order of combination, that is, first and second unions of the same elements. This deficiency is fairly removed by the new arrangement. Now, Cu_2O formerly read sub-oxide of copper, is read cuprous oxide, and $Cu\ O$ once read protoxide of copper is spoken cupric oxide, by a slight modification of the general law already given.

But the improvement is not confined to binaries; it extends to ternaries as well—to salts and acids. Where an acid, for example, combines with an *ous* base or oxide, it is not named a proto-sulphate, or proto-nitrate as the case may be, but simple an *ous* salt. $Fe\ O$ united with sulphuric acid, is ferrous sulphate, and not proto-sulphate of iron, as formerly, and $Fe_2\ O_3$ with the same acid, is ferric-sulphate instead of per or sesqui-sulplate. Nothing can be plainer or simpler than this.

We remarked that for certain reasons, the Latin names of elements were used in the construction of those of compounds; yet $Ag\ N\ O_3$ is not read argentous-nitrate, but silver-nitrate, for the simple reason, that silver, as an adjective, is more euphoneous and convenient than argentous. There are other examples of the same kind. Both $C\ O$ and $C\ O_2$ have the adjective *carbonic* before the negative ingredient, since carbonous is not so smooth or convenient a word; they are carbonic dioxide and carbonic acids.

A characteristic of the terminal *ide* is worthy of special notice; it invariably indicates a compound of only two elements.

The method of naming higher compounds of three or more elements, such as the acids, salts and bases, is precisely analogous to that of the binaries, through the operation of the simple rule already given. By far the greater number of the mineral acids are compounds of hydrogen and oxygen united with some third element. This third ingredient gives the compound its distinctive character, and consequently its name; precisely, therefore, as in the *ide* molecules, a greater or less quantity of oxygen in the compound is indicated by the suffixes *ic* and *ous*.

$H\ N\ O_3$ is Nitric acid: $H\ N\ O_2$ is Nitrous acid; $H_2S\ O_4$ is Sulphuric acid; $H_2\ S\ O_3$ is Sulphurous acid.

Now there are several processes by which the hydrogen in any acid may be replaced by a positive metal forming these, by a large, and important class of compounds known as salts. Here again, the system is true to simplicity and analogy; the generic name of the salt is formed from that of the acid, by changing the terminals *ic* or *ous* into *ate* or *ite* according to the acid used. Phosphoric acid form phosphates; phosphorous, phosphites; carbonic acid, carbonates; sulphuric acid, sulphates and sulphurous acid, sulphites.

As before, the several salts of the same acid are distinguished by adjectives formed from the name of the positive ingredient.

If the acid be $H N O_3$ or nitric acid, and the metal, sodium, then the salt will be sodic nitrate; if silver, argentic nitrate, if coper, cupric nitrate, etc. But if the acid be $H N O_2$ nitrous acid, the same metals, in succession, may form sodic nitrate; argentic nitrite, and cupric nitrite. And again, as in the oxides, where there is more than one equivalent of oxygen in the base, the suffixes *ic* and *ous* are in easy requisition, and we have $Fe S O_4$ ferrous sulphate and $Fe_2 S_3O_4$ ferric sulphate, $Hg_2S O_4$ mercurous sulplate, and $Hg S O_4$ mercuric sulphate.

When the name of the positive element of the base does not afford an agreeable objection in *ous*, then an *ic* adjective is used in any equivalency of the negative, or the original name unchanged. Hence, K_2O is read potassium monoxide.

K_2O_2 potass*ium* dioxide, and K_2O_4 potass*ium* tetroxide or potass*ic* in each case, and not potasseous. The same remark may be of sodium; $Na_2 O$ is sodi*um* monoxide, and Na_2O_2 sodi*um* dioxide or sod*ic* in each case.

But an acid is also, a salt, and may be named as such. $H N O_3$ is, therefore hydric nitr*rate*, and $H N O_2$ hydric nitrite. These are really the chemical names of those acids, while those already given above, are but their common, every day names; that is nitric and nitrous acid.

An acid may be readily converted, not only into a salt, but also into a base, and a base into an acid again, or salt. Acids, bases and salts, therefore, do not differ from each other, neither in their nature, whatever that may be, nor molecular form.

This is, doubtless, the most distinctive feature of the new chemistry, and is in close analogy with that most remarkable scientific generalization of the age, the CORRELATION OF ENERGY in the world of physics. Mechanical force is convertable into heat, heat into electricity, and this again into mechanical force and heat, and the latter, once more, into mechanical energy. Whatever, therefore, is the essential nature of one of these physical forces, it is identical with that of all the rest.

These facts, as regards, especially, the last mentioned chemical compounds, have materially modified the nomenclature. $Na_2 SO_3$ is a salt, sodic sulphite, in which two atoms of hydrogen in the acid, have been replaced by two equivalents of sodium, and $H_2 SO_3$, the acid from which it is derived. Sodic, or sodium sulphite, is a salt in which two other atoms of hydrogen, in two equivalents of water, have been replaced by the negative SO_2 forming sulphurous acid.

$H_2 SO_4$ is hydric sulphate, or an ate salt from the same water base; $H_2 S_2 O_3$, hydric hyposulphite, or hyposulphurous acid.

Take $Na_2 SO_3$ again, replace its two atoms of sodium with as many of hydrogen, and it is once more $H_2 SO_3$, an acid, without the least change of molecular form.

$Na_2 SO_3$ is a normal salt that is perfectly neutral as regards acid or basic properties. Now replace but one of the two hydrogen atoms of the acid $H_2 SO_3$ with as many of the sodium, and there appears an acid salt whose symbol is H. Na SO_3, hydrosodium sulphite.

Take the base K O H, potassium hydrate, another salt from the water base, replace its hydrogen atom with the negative radical, N O_2, and there results K N O_3, potassic nitrate, or a base changed to a salt.

The double salts, whose names were so ill-provided for by the old nomenclature, are especially indebted to the simplicity and euphony of the new. Na Ca Sb O_4, is sodio-calcium antimoniate. $Na_2 Al_2 Cl_8$, is sodio-aluminum-chloride; and $Al_2 K_2 (S O_4)_4 x_{24} H_2 O$, the well known complex molecule of common alum, is read, patassio-aluminic sulphate.

The names acid, salt and base, it is obvious, have lost all distinctive, or technical meaning in chemistry. They are only necessary now from having been fixed, or crystalized, as it were, in usage, from long popular habit and scientific recognition. They are consigned to the same category with such terms as IDEA in intellectual philosophy, CURRENT and FLOW, NEGATIVE and POSITIVE, in electricity, and INCIDENCE and REFLECTION in optics—SCIENTIFICALLY black-balled, but PRESCRIPTIVELY and TRADITIONALLY enthroned forever.

The proposition in regard to notation, at the head of this paper must be reserved for another number of the JOURNAL.

CINCHONA ALKALOIDS AND THEIR SALTS.

BY FERDINAND KING, M.D., PH.G., ATLANTA, GA.

Owing to the scarcity and high price of quinine, physicians have for some time past been experimenting with quite a number of alkaloids of various kinds, in the hope of finding a good substitute for that time honored and well known remedial agent. These experiments and investigations which have been more vigorously prosecuted in the western and southern States than elsewhere, have not been confined exclusively to the small group of alkaloids derived from cinchona, but have embraced every other remedy calculated to produce an anti-periodic or febrifuge effect upon the animal economy. In searching for this much coveted substitute our profession has been sadly imposed upon by large numbers of silver-tongued agents sent out by unscrupulous, enterprising manufacturers who by their smiles and graces induce some leading physicians to give their preparations a trial, thus creating a temporary demand for them, thereby enriching the originators and making consumers poorer and very little wiser. In my humble judgment we lose ground every time we deviate from the old and long beaten track. The scientific investigator so far has been unable to find anything possessing the same anti-periodic properties as cinchona and its preparations. Some new discoveries have for a time enjoyed considerable reputation, but after thorough tests, have gone down before cinchona and its allies, never to rise again.

Sometimes we have unpleasant symptoms, such as urticaria, following the administration of quinine, which I am sure depends upon some idiosyncrasy of the patient, just as catarrhal symptoms not unfrequently result from the use of iodide of potassium. These consequences observable in such a small per cent. of patients where valuable therapeutic agents are administered, should not, I am sure, prejudice us against their general use. The same objections urged against the use of quinine under certain pothological conditions can with equal propriety be applied to the other alkaloids of cinchona-quinidia, cinchonidia, quinidia and cinchonia. These unpleasant effects are observable when we administer any of the alkaloids just enumerated, in large doses. Take for example, sulphate of cinchonida, which is perfectly worthless as an anti-periodic unless we give at least three times as much of it at a dose, as we do of the quinine. When given in these large doses we find all the symptoms of true "quinenism" present—such as cerebral disturbance evinced by a feeling of tightness in the head, ringing in the ears, difficulty of hearing, etc. It seems that these effects must be secured before the system of our patient can be considered proof against repeated malarial paroxysms. As it requires three or four times as much sulphate of cinchonidia for example, to secure this "quininism" as it does of the sulphate of quinine, I think we practice poor economy in administering the former in preference to the latter.

I do not think the *modus operandi* by which the various alkaloids of cinchona relieve malarial fevers or influences is really understood by a large majority of our profession, but that it is too often hypothetical in the minds of our average practitioner. That some, and perhaps many, of these hypotheses are correct, I do not pretend to deny. We all know that the blood undergoes the most remarkable changes in patients suffering from the effects of malarial poison. There is a very perceptible increase in the quantity of the plasma or alkaline fluid, while there is a corresponding decrease in the red globules or corpuscles. This condition is plainly evinced by the characteristic paleness always observable in patients suffering from malarial anæmia. Scientific and intelligent physicians will readily agree that it is necessary to restore the blood to its normal condition before we can give back to our patient his wonted health. We should therefore examine his blood, and learn what elements are wanting, before we attempt to administer remedies. We should then give him such medicinal agents as are calculated to replace the lost elements and restore the blood to its original healthy condition. We find nothing in our materia medica that meets all the indications in these cases as completely as the cinchona or Peruvian bark itself, but owing to its bulk and the length of time required for its assimilation, it is objectionable. The ingenunity of the intelligent pharmacist has overcome these objections by giving us all the active principles of the Peruvian bark in a combination very appropriately called by its manufacturers (Messrs.

Billings, Clapp & Co., of Boston) *cincho-quinine.* In this combination we find the nearest approach to the original substance, Peruvian bark, that modern science has yet attained. It is, as before stated, a combination of all the active medicinal principles of the best calisaya bark; and, after the long and thorough testing it has had, it stands unrivalled as a prompt, safe, and uniformly reliable antiperiodic, possessing all the advantages, with none of the disadvantages, of sulphate of quinine, or any of the single alkaloids of the cinchona. It is entirely free from such external agents as sugar, liquorice, starch, magnesia, etc. It is wholly composed of the bark alkaloids, quinia, cinchonia, quinidia, cinchonidia, and the other alkaloidal principles which have not been distinctly isolated, and the precise nature of which is not well understood. Analyses by disinterested chemists attest their presence. In its preparation all the active tonic and febrifuge principles of the bark are secured without the inert bulky lignin, gum, tannic acid, etc. It exerts the full therapeutic influence of sulphate of quinia, in the *same dose,* without oppressing the stomach or creating nausea. It seldom produces cerebral distress, as quinine does, and I have found it to produce much less constitutional disturbance than the latter agent.

During my experience as a country doctor, in the swamps of Alabama, I found it far superior to any other preparation I ever used in the treatment of the chronic forms of chills found there. I could not cure my patients with the quinine uncombined, as it simply acted as a cerebral stimulant, and didn't seem to improve the debilitated condition of the sufferer, as did cincho-quinine. I have never found any difficulty in getting the most delicate child or squeamish female to swallow the cincho, as it is almost tasteless and does not leave that clinging, lasting, bitter taste peculiar to the sulphate.

One of the main points I desire to impress upon the minds of those who read this article is, that cincho-quinine is not sulphate of quinine; it is not sulphate of cinchonidia, but it is all the alkaloids in *combination,* and it is this composition, this representation of all the medicinal principles found in Peruvian bark that gives it the value claimed for it over and above all other preparations, or any one of the alkaloids.

It is generally believed by a large number of old practitioners that the reason why larger quantities of quinine are required to combat malarial diseases than formally, is not because of the impurity of the sulphate of quinine but because it is too purely and solely a sulphate lacking the other useful and important principles above referred to, and that are so surely calculated to successfully overcome the various unfavorable pathological conditions that invariably present themselves in patients suffering from exposure to malarial or miasmatic influences.

Cincho-quinine is not explosive in its action, as in the *combination* the amount of nitrogen always present in most alkaloids, is greatly diminished by uniting the several cinchonia alkaloids, hence less cerebral feelings and less constitutional disturbance follow its administration than are usually attendant upon the use of the uncombined alkaloids. The same rules as I before stated, are to be observed with regard to the use of the cincho-quinine that govern the use of the sulphate. It is given in the same doses and where the *siege* treatment is indicated, it commends itself to the special attention of the entire medical profession.

Cincho-quinine has been thoroughly tested by many of the most learned teachers and practitioners of medicine in the north and west, and in some sections of the southern States, giving in every instance the most satisfactory results. Indeed I have heard of it being abandoned in no instance, while sulphate of cinchonidia and other cheap alkaloids have gone into total disuse.

Not only should the real value of cincho-quinine recommend the article to our profession, but its low price is another inducement for us to prescribe it. It is less costly than the sulplate while the dose is the same. The price of it fluctuates with the rise and fall of the Peruvian bark just as in the case of the sulphate, still it is at times furnished at about half the cost of the latter article. Some may ask why the cincho-quinine has not come into more general use in the south. To such I would say, it is from the fact that it has been but recently offered to the profession, and has not been so extensively advertised as sulphate cinchonidia and some of the other more worthless articles that have been forced into the offices of a large number of our physicians. Cincho-quinine stands upon its own merits, and will come into more general use at an early day. I know personally, at this comparatively early day, several physicians in our own State, who use it altogether in preference to quinine or any of the single alkaloids. It is not pushed upon our profession by an army of smiling agents that infest our country, singing songs and tipping social glasses with the liberal members of our medical societies at their local or State meetings. Its manufacturers claim no special praise for giving us this valuable and economical remedy. And here I would state—rather parenthetically, that "we are under lasting obligations" to *no living firm* of manufacturing chemists for the cinchona alkolides, as they were all discovered even prior to 1835. The praise for scientific discoveries should, in my humble judgment, be awarded the discoverer, and not him who profits and grows rich by it.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

ATLANTA, GA., May, 8, 1877.

Vice-President A. W. Calhoun in the chair.

Dr. R. W. Westmoreland presented, for the inspection of the Academy, a fatty tumor which had been removed from the upper portion of the thigh. The pathological specimen was presented for the purpose of calling their attention to Lister's antiseptic method, which had been used during the operation. Carbolic spray (composed of one part of carbolic acid to twenty of water) was thrown constantly upon the part, from the commencement of the operation to its completion, and the instruments and hands of the operator washed in it. The incision for removal of the tumor was eight inches long. The two edges of the wound were brought together by sutures then covered with a cloth saturated with a solution of carbolic acid. Three days has elapsed since the operation, and there is no evidence of untoward inflammation. The parts have the appearance of uniting by the first intention.

Dr. W. F. Westmoreland: There is no doubt that the antiseptic treatment, as practiced by Lister, will prevent suppurative inflammation, under favorable circumstances. The reports of European surgeons are very favorable. In large lacerated wounds, they have found the carbolic dressing especially beneficial.

Dr. J. T. Johnson thought that it would require a wound of more serious character to constitute a test of the value of the method.

Dr. J. G. Westmoreland said that the object of applying the antiseptic by European surgeons, seemed to be that of destroying bacteria, which they suppose, by coming in contact with the injured part, lead to inflammation. He believes carbolic acid will prevent putrefaction and perhaps inflammation, but thinks, as the former often occurs in deep-seated parts that are protected from contact with the supposed organism, that it is not due to bacteria. In fact, putrefaction in dead animals generally commences at the bone. It is a natural process, after the loss of vitality, but may be arrested, or prevented, by the presence of carbolic acid.

Dr. W. F. W. said: He thought that Dr. John W. did not understand what Dr. Lister claimed for this method. Pus may occur from a high grade of inflammation. He remarked that, if we take milk, and excluded these molecules, or organisms, we prevent putrefaction. It is not the atmosphere that produces degeneration, but the organisms that float freely in it, and coming in contact with certain substances produce decay.

Dr. V. H. Taliaferro called the attention of the Academy to the antiseptic properties of turpentine. He thinks that it is equally as effective as carbolic acid, when applied to wounds, and has the advantage of always being readily obtained, and is much cheaper.

Dr. W. F. Westmoreland reported a very unique and interesting case. He was called to Fayetteville, about a week ago, to see a stout, robust man of middle life. Upon examination, the scrotum and penis were found to be of immense size from the effusion of serum. The distension was the result of an accute inflammation. He had been a sufferer for the last 18 months. He had urinated more or less freely up to the outburst of the acute inflammation, and since that time he has had obstruction of urine. The treatment was commenced with the idea that there was an infiltration of urine into the scrotum and cellular tissue. Numerous small incision were made in the scrotum, followed by a profuse flow of urine and pus, but without pain. His condition was alarming, the constitutional signs indicated the gravity of his disease. Gangrenous inflammation had also begun as was shown by the blackening and insensibility of the scrotum. An endeavor was made to save as much tissue as possible, by freely puncturing and incising the greatly distended tissues. Large portions of the scrotum sloughed off, notwithstanding the punctures and incisions. The condition at present is very favorable. He has passed through the trying ordeal with the following lesions: the loss of his scrotum and of the bulbous portion of the urethra, or more properly the tissue surrounding the bulb. The catheter can now be passed with perfect facility, and the urine drawn off. The diet throughout has been very nutritious.

Dr. W. F. W. spoke of the nitrate of lead as an antiseptic. He had found it effective where other antiseptics had failed.

Dr. J. M. Johnson: Was called, on the 23d February, at four o'clock A.M, to see Mrs. L., of West End, at confinement with her third child. He found a large bag of water, which he ruptured, and the labor terminated in a few minutes. As soon as the child was disposed of, he turned his attention to delivering the after-birth, and found that the womb, which had contracted well at first, had receded, and could not be felt except above the navel. By external manipulations he succeeded in inducing pretty firm contraction, and upon examination found the placenta decending, but attended with considerable hemorrhage, which he thought was the blood contained in the placenta. Gentle traction was made on the cord, and finally the forefinger was hitched into a loop of the placenta, which gave way at a very gentle pull, and the blood flowed so furiously that he introduced his left hand to the fundus, which had receded to the position first described, and with his right, grasped it, and seizing the afterbirth withdrew it. The contraction lasted but for a moment however, when the womb receded again and the blood flowed as before. He then discovered that the placenta was delivered entire, but the membranes remained. He again thrust his hand to the fundus, to find the membranes so firmly adherent that they had to be scraped off with the finger nail. He began this operation, working as vigorously as possible, when the womb suddenly contracted again and expelled his hand, bringing away less than half of the adhearing membranes, and attended with an immense discharge of blood. Fifteen minutes had now alapsed, and his patient had lost half the blood in her body. Ice, which had to be sent for, a distance of four hundred yards, arrived at this stage of the trouble, and a piece nearly as large as a goose egg, was introduced to the seat of difficulty and passed rapidly round the entire surface of the womb; contraction again followed, but did not detach the membranes. In two or three minutes the womb receded again, and he again introduced his hand with a large lump of ice, which he turned loose and resumed work on the adhearing membranes with his finger nail. At the next contraction, four-fifths had been removed, and at the next relaxation, the last vestige was removed, and the entire surface well explored to make sure that nothing was retained. Here he expected his trouble to end, but it did not. The womb continued to relax and contract in this manner for two hours and a half, and he kept his hand, with a lump of ice as large as a goose egg, continually in the womb, all that time, except when expelled. He passed his hand with the ice into the womb to the fundus more than twenty times before the womb became permanently contrated. In conclusion, he said that nearly or quite ten pounds of ice was consumed, the patient became pulseless, and nearly every drop of blood had apparently drained away, but she rallied rapidly, and has had as good a recovery as he could ask.

Dr. Johnson is of opinion that many lives might be saved by the boldness here practised. It would seem to be not generally known that the womb is large enough for the hand of the accoucheur, or at least he rarely hears or reads of such an exploit. In his opinion the hand may be harmlessly and beneficially introduced into the womb, even to remove clots, to say nothing of the adhering secondines. In a practice of forty-six years, he has not met with a case like it.

Dr. Taliaferro said he was at a loss to determine in what Dr. Johnson's case was peculiar. Was it in the inertia? That was common. Was it in the hemorrhage? that was not unfrequent. Was it the retention of a portion of the membranes, chorion and amnion, that occured so frequently, and made so little difference whether it came off or not, that he hardly considered it a factor in the case. The lochia will wash these away, for some portions he thought was more than apt to be left behind; of course he did not allude to the placenta as a membrane or part of them.

Dr. W. F. Westmoreland said that he thought it was a matter of no little moment. For a piece, the size of a pea was sufficient to cause septicæmia, and a clot of blood smaller in bulk than the membranes, had given rise to, and been the cause of continuous recurring and even fatal hemorrhage.

[NOTE.—The above report and comments thereon present, indeed, an anomalous affair. We can conceive of a portion of the placenta remaining adherent to the uterus, but cannot understand how the membranes can *adhere* after the placenta has been removed entire.—EDS.]

J. S. TODD, M.D., REPORTER.

ATLANTA, May 15, 1877.

V. H. Taliaferro, M.D., President, presiding.

Upon discussing the entertaining essay, printed elsewhere, by Dr. Henry L. Wilson, on mania a potu,

Dr. Jno. G. Westmorland favors the idea that this condition is brought about by the withdrawal of the stimulant.

Dr. Baird was distinctly of the opinion that delirium tremens was caused by both the withdrawal and continuance of the liquor; i. e. a long continued excessive use of the alcoholic liquors would give rise to this condition; so would the sudden cessation.

These opposite conditions, causing the same disease, has in his opinion been the cause of the diversity of opinions as to the treatment with or without stimulants, alcoholic in character. He had practiced and would advise the giving of whisky to a case where its withdrawal had been the exciting cause of the attack, on the other hand, where the delirum tremens was consequent upon a debauch, he would prohibit its use. Where it was necessary to administer alcoholic stimulants, he would gradually lessen the quantity and endeavor to procure sleep by the administration of opium. In these forms of the affection the result of excessive ingestion, of alcohol, he placed confidence in large doses of the bromide of potass. one drachm, hydrate of chloral 10 to 20 grains, repeated as required.

Dr. Westmoreland asked Dr. Baird if his remarks were the convictions of his observations of the disease, or the result of reading.

Dr. Baird: Both observation and research taught him that he was correct.

Dr. Westmoreland could not understand how the absence of alcohol should produce the same train of symptoms as its excessive use. He always withholds it in treating the disease. He believes that the disease would sometimes be arrested by the giving of alcohol alone, but it would lead to it in the end, therefore he does not give it at all. Until sleep is secured no medication will be of any avail towards a cure. He stimulates the brain with opium, chloroform, chloral and the like.

Dr. J. M. Johnson's observation, which has been extensive, coincides with those of Dr. Baird, and accordingly he sometimes gives and sometimes withholds whisky. He gives a large purgative dose of calomel, also opium, bromides, chloral, and when the pulse is rapid and strong tinct. varatum viride; has also found alkalies, such as magnesia and chalk of service in allaying the irritable condition of the stomach. Just cured a case where the mania came on six or eight days after all potations had ceased, and which required ten or twelve doses of morphia, a grain each to induce sleep.

Dr. W. F. Westmoreland said he thought there were two varieties of the affection, but his views were not well defined. He believes that the withdrawal is more frequently the cause, than excessive ingestion. A man may continue to drink, drink excessively, but his digestive organs be in such a disordered state that the stimulous will not be appropriated. This is the same as withholding it, for it does not go into the blood. To control the circulation is a disideratum devoutly to be hoped for. For this purpose in England digitalis in half ounce doses of the tincture have been repeatedly given, and the reports of its good effects are almost universal. Dr. Dugas, of Augusta, uses the cold douche to accomplish the same end. With him varatrum takes precedence. He has found that all agents act better after mercurial. Considers it the shortest way to secure sleep and cure the case, to give calomel and then the anodynes.

Dr. Johnson said to Dr. Wesmoreland, I would not let it go out to the country with my apparent sanction, for he was satisfied Dr. Westmoreland did not mean it, that he would advise the use of tinct. digitalis in half oz. doses. He was satisfied that it would be the cause of some funerals. He would relieve, and endeavor to put to sleep with 20 to 30 gr. doses of chloral and drachm doses of bromide potass., and not wait for the purgation. Let it come on afterwards. Advised members not to carry the cold douche to the back of the head too far, less you bring in a colapse which will give you trouble.

Dr. Westmoreland: The dose of digitalis he had mentioneed was a standard remedy in England. He had never given it himself however.

Dr. Johnson was glad to hear him say so.

Dr. Baird alluded to a case where a patient had all the symptoms of mania a potu from excessive drinking during the day, absinthe was also in the last potation. Has he to wait in this case for the action of a purgative? He thought not, and gave 30 or 40 drops of tinct. opii, 30 grs. potass. bro. and 20 chloral hydrate, and in a very short while he was asleep and required no further attention.

Dr. Westmoreland considered his patient drunk; nothing more than wild from excessive stimulation, and not mania a potu.

Dr. Baird said he thought it a typical case of mania.

Dr. Jno. G. Westmoreland: Why did you not give whisky?

Dr. Baird: Because it was of the very class of cases which being produced by too much alcohol, was to be treated by not giving it.

Dr. Todd thought Dr. Baird's etiology of the disease correct, and endorses his treatment as to the alcohol, etc. He thought that the administration of calomel was essential when you had a well developed case, which was nearly always attended by constipation, dry tongue, etc. The failure of large doses of opium, chloral, etc., to produce sleep was because they were not absorbed. You must unlock the portal circulation before digestion can take place. As vomiting is generally a prominent symptom, and veratrum an emetic, if he gave it at all, should do so hypodermically. Calomel not only acts on the liver, but allays in large or very small doses, irritability of the stomach.

Dr. McIntosh asked Dr. Todd if he thought calomel would be any more likely to be absorbed, it being insoluble, than other medicines, such as morphia, bromides and chloral, which were so soluble? and also asked if calomel could act before it was taken up, i. e. absorbed.

Dr. Todd said there was something inexplicable about the good results obtained from calomel. He did not believe that any medicine could benefit a constitutional malady unless it was first absorbed. The older authors claimed that mercurials acted upon the liver by stimulating the duodenal orifice of the ductus communis choledocus. If this is true, bile being the natural peristaltic stimulus to the intestines, and playing an important part in digestion, then it was possible for calomel to act before being absorbed. He was glad Dr. McIntosh asked him the question, and believed it to be a fundamental truth that medicines must be absorbed to be of benefit to other than local affections.

Dr. J. G. Westmoreland: Although cantharides may be absorbed from the skin and affect other parts after entering the circulation, its blistering effect is made by local action, and may be had without absorption. Do you believe that it is absorbed in order to form a blister?

Dr. Todd: *Most assuredly.* No blister is formed until absorption of some of the flies takes place. Strangary often follows the application of flies, which could not occur unless it had found its way into the blood. The difficulty of obtaining a blister during high fever, or collapse is also confirmative of his views. The perverted state of the absorbents of the skin prevented its absorption during these conditions, and the result was no blister, until the fever abated, or reaction was established.

Dr. Todd thought calomel less likely to be taken up than morphia, bromides or chloral, in fact was absorbed with more difficulty than any other remedy.

Dr. Jno. M. Johnson: Calomel will act by its very weight. Its absorption was not necessary as a purgative.

Dr. Todd: The weight will not carry it up the ascending colon.

Dr. Johnson: Had known of a man to swallow a set of teeth and they got up it, and were voided per annum. Fluids are very apt to be absorbed without any reference to the condition of the bowels. He knew of a woman, whose stomach digested enough nutriment to keep her alive for several years, and her bowels only acted twice in a year. Saccharated calomel acts in small quantities because it goes directly into the circulation. The attrition with the sugar reduces the particles so small that they find entrance into the mouths of the absorbents.

Atlanta, May 22, 1877.

Vice President, Dr. A. W. Calhoun, in the chair.

Dr. J. T. Johnson read an essay on small congenital urethal meatus.

Dr. Simpson had recently given prompt and permanent relief to a patient who has been treated for piles. He found upon examination that he was the subject of an anal fissure, which he forcibly dilated. He thought this operation preferable to that of dividing the sphincter with a knife, because occasionally the latter operation was followed by inability to retain the fæces, and gases of the intestines on account of the failure of union of the divided muscular fibres.

Dr. Todd said he considered it a question of some moment to determine which was the better operation, forcible dilatation or cutting, and asked an expression of the members.

Dr. J. T. Johnson said that permanent paralysis of the sphincter following either operation was so rare that he had not been able from reading or observation, to decide which was the more likely to give troublesome sequences.

Dr. J. G. Westmoreland: Reasoning from analogy, was inclined to think that as a clean cut healed more readily than a contused or torne wound, that the cutting would be therefore less apt to give paralysis of a permanent character, and less likely to cure the fissure.

Academy adjourned.

O. R. FORD, M.D. REPORTER.

ATLANTA, May 29, 1877.

Dr. A. W. Calhoun, second Vice-President, presiding.

Dr. W. F. Westmoreland reported a case of interest and importance. The subject, a well known physician of this State, was bitten by an angry bitch, about nine weeks ago.

The animal had been spayed by the Doctor, and died in a day or two after inflicting the wound, of peritonitis, the result of the operation.

The bite amounted simply to an abrasion on the forefinger of the right hand. No importance was attached to it, and it healed kindly. Shortly after this, the other hand was slightly wounded by a spicula of bone, in an operation upon a horse, followed in a few days by neuralgic pains, radiating from the point of injury. These, however, subsided spontaneously in less than a week. About three weeks after the reception of the bite, irregular, shooting pains commenced in the finger, hand, arm and shoulder, of the right side. These pains soon became very intense, and while they have not been continuous, there have been, constantly, various uneasy sensations, as heaviness, burning, twitching, etc., in the affected limb. The usual remedies for neuralgia have been used in rotation without appreciable benefit.. Iron, quinine, strychnia, phosphorus, etc., have been faithfully tried. Opium, which it has been necessary to use on account of the severity of the pain, secures only a temporary freedom from suffering. He is now using the constant galvanic current to the arm, and has obtained more relief from it than from any other remedy.

What is the cause of the difficulty?

He expressed the belief that the train of symptoms observed were due to inoculation with the saliva of an angry dog. He referred casually to the case of a gentleman who was bitten several years ago by a rat. He suffered severely from the most alarming train of nervous symptoms, for six or eight weeks, but finally recovered. He presented the two cases as in many points analogous, and said he believed the symptoms were in both cases the result of inoculation with poisonous saliva, and that the saliva was poisonous because the animals were angry.

It is claimed that hydrophobia may result from the bite of an angry dog, or a bitch in heat, and that it is not necessary that the animal should be rabid, for the production of the disease. He is of the opinion that this is true. He believes that the quality of the saliva is changed by passion, and that it is increased in quantity. A bite from a dog, under these circumstances, may be followed by a train of nervous symptoms identical with, or closely simulating hydrophobia. This is said to be proven as to the Spitz dog, and statistics show an increase of fifty per cent. in cases of hydrophobia, since their introduction into this country.

Dr. John G. Westmoreland said the temper of the animal, and the quality of the saliva, had nothing to do with the symptoms, in the case of the gentleman bitten by the rat. He saw the case alluded to—had attributed the symptoms observed to septicæmia. He had known similar consequence ensue from a puncture by a pin. The peculiar character of the wounds, being narrow and deep, favors this result. Thinks that hydrophobia and tetanus are often counfounded. Once saw a man die of tetanus, after being bitten by a dog.

Dr. W. F. Westmoreland remarked that the history of the case was not one of septic poisoning, purely. Trivial wounds are frequently sustained without any following disturbance, but the bite of a rabid animal results in the most distressing symptoms. It is the poison that is introduced, and not the wound, that does the damage.

Dr. Baird was familiar with the case reported by Dr. Westmoreland, and disagreed with him, both as to the cause and nature of the affection. Unfortunately, for the sake of his argument, it is based solely upon hypotheses. He offers no evidence in support of his belief that the symptoms detailed are the result of the bite of the bitch—the opinion advanced 'that emotional activity renders the saliva poisonous is by no means established, and the theory that hydrophobia, or even abnormal nervous phenomena, may result from the bite of an animal not rabid himself is, to say the least of it, open to grave doubts. The gentleman certainly has not the symptoms of hydrophobia, so the consideration of that disease may be, at once, discarded. If the disturbance observed was the result of a poison taken into the circulation, as alleged by Dr. Westmoreland, it seems very remarkable that, acting as it must, through the nervous centers, that symptoms should be limited to deragements of sensibility in one limb. It is surely not a common state of things to find the blood charged with "poison" and the individual in robust health, with all the functions of the body normally performed, and the only evidence of the existence of a serious constitutional infection, a neuralgia of some of the nerves of one arm! He could understand how a wound of a nerve trunk, or even a nevous filament, might result in an inflammation of the sheath, and a protracted source of irritation thus becomes established, but in this particular case, the hyperæsthesia is not confined to a single nerve, and is not fixed in any number of nerves, but shifts its position irregularly, from place to place, and this fact, together with the intensity of the pain experienced, convinces him that the mind is an important element in the causation of the trouble. He believes there is some neuralgia, but that it has not been caused by the bite; this fact however, has induced the patient to exaggerate sensations observed, that, under ordinary circumstances, would not have attracted attention. He thinks the disease is neuralgia, and pathaphobia. He gave a very favorable prognosis.

Dr. W. F. Westmorland added that there had been some fever and derangements of the digestion.

Dr. Todd observed that he had never known it claimed that one angry dog could produce hydrophobia in another dog. It is impossible to imagine a higher degree of passion than is exhibited by two dogs fighting each other; yet hydrophobia has never been developed from this source. Why should it follow the bite of an angry dog in the human subject? He cannot subscribe to the doctrine. Hydrophobia seems to be the fashion in New York, and statistics feels its influence.

Dr. Baird added that Spitz dogs are the fashion, and if women will have dogs instead of babies, they must expect to suffer the real or imaginary penalties that attach to the unnatural fancy.

Dr. J. G. Westmoreland desired to call the attention of members to the following case of meningitis: On the 12th of May, a sprightly, intellectual girl, some eight or ten years old, complained of feeling unwell in the afternoon, and at night grew worse, with perverted vision and other unpleasant symptoms. Objects were seen double and inverted. Fever, restlessness, opisthotonos, delirium, and a sense of suffocation, or *choking*, as the patient expressed it, ensued. Was called at 2½ o'clock, two or three days after these symptoms were first manifested, and found the little girl flouncing and writhing, with various contortions of the body and limbs, with occasional complaint of choking, which was about the only word spoken distinctly. The pupils were widely dilated, the skin hot, and the pulse moderately full and frequent. No opisthotonos was present at the time, but, as reported, had been a prominent symptom the previous night. Symptoms of suffocation soon became alarming, and in thirty minutes after seeing the patient, breathing ceased entirely, the face and lips exhibiting the purple hue of asphyxia. Artificial respiration was kept up two or three minutes, but ascertaining that the regular process was not established, it was continued, in all, at least five minutes, before artificial means could be dispensed with. Evidently asphyxia was from paralysis of the pneumogastric nerve.

The treatment consisted of a blister to back of head and neck, which was applied the previous night, the abstraction of blood from the arm, thirty grains of calomel, and the eighth of a grain of morphine hypodermically. This was commenced immediately on my arrival.

The patient was comfortable in two hours, ond rested well during the night, fever gradually abating, so that very little was present next morning.

Some rise of fever during the afternoon of the second day, and tendency to restlessness and muscular agitation during the night concluded the unpleasant symptoms, and the patient rapidly recovered.

He asked members to name the disease, and had in reply the opinion of its being an unmistakable case of cerebro-spinal meningitis, from which no one dissented.

Selections.

A CONTRIBUTION TO MEDICAL JURISPRUDENCE.—*By G. W. H. Kemper, M.D.*—In December last, at the city of Muncie, Dr. J. P. McIlwain, of Eaton, Delaware county, Ind., was tried for the murder of Miss Mary Alice Foorman, a resident of the same locality. On account of the medical points involved, I have thought a synopsis of the case worth reporting. I shall aim, in all my statements, to be governed by the testimony of sworn witnesses.

On the 8th day of November, 1875, Miss Foorman, aged nineteen years, and supposed to be pregnant, mysteriously disappeared from her home, and all attempts to fathom the mystery were fruitless until the last of April, 1876, when certain members of her family made disclosures that led to the arrest of Drs. J. P. McIlwain and H. B. Manzer; thus, too, it was learned that the girl was dead, and buried near Eaton. The authorities at once offered a reward for her body, and on Sunday, May 7, 1876, at four o'clock P.M., the body was discovered and exhumed.

The body was buried in a wet portion of ground; the grave was about two feet deep, dug in an excavation caused by a tree having been blown over by its roots. About six inches of soil and some pieces of wood were thrown over the body, and all under water of some depth. The soil was so loose that the finder dug out the corpse simply with his hands. The body was dressed in a pair of cotton hose, cotton drawers, chemise, and night-gown. A woolen shawl lay across the chest, and the body was wrapped in a coarse woolen blanket.

Immediately after exhumation, the coroner of that county (Blackford) was notified that an inquisition was held. Drs. W. C. Ransom and P. Drayer, of Hartford, made a post mortem examination. The features were well preserved, and looked quite natural for several hours after disinterment. A large number of witnesses recognized the body as that of Mary A. Foorman.*

I saw the body the following morning at half past seven o'clock, at the village of Eaton, where it had been removed for burial. It was thought that the examination of the previous day was not sufficiently complete, and accordingly Drs. Ransom and Drayer were notified by telegraph, and arrived at noon, and proceeded at once with a further examination. Drs. James, Boyden, Leech, and myself, all of Muncie, witnessed the dissection. I made the following notes:

Second Examination—Twenty Hours after Exhumation.—Odor very offensive. All the hair was absent from the scalp, except a small patch at occiput. The cuticle was detached at various places of the body, of the extremities, and also of the mammary glands, the areolæ being thus destroyed. The pubic hairs had fallen off. There was no blood present in the blood vessels, nor in any cavity of the body. Section by Dr. W. C. Ransom.

The *brain* was first exposed by removing the calvarium. The dura mater was intact, and presented an ashen gray color. The whole mass appeared shrunken, so that the cranium was not completely filled. The brain substance was disorganized, and spread out when the dura mater was removed. Odor not so offensive as is usual after decomposition begins.

The *lungs* were *in situ*—collapsed. They presented a dark purplish hue, and were in a very good state of preservation.

The *heart* had been removed at the previous dissection, examined and replaced in the thoracic cavity. Its interior was exposed, and all the appearances indicated a normal condition. The organ was well preserved.

The *liver* was a decomposed and putrid mass.

The *uterus* had been removed the previous evening, placed in a glass jar, and sealed. It was exhibited at this time for inspection. It was enlarged, weighing seven and a half ounces avoirdupois. It measured from os to fundus seven and a half inches, and the greatest width four and a half inches. The walls were half an inch in thickness and spongy. The entire organ was well preserved. The internal surface of the body was denuded of mucous membrane, and presented a dark red color. A spot situated near the fundus indicated a placental site. The os was patulous, its diameter being about three-fourths of an inch.

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*The fact of this recognition is remarkable. She was buried one hundred and seventy-eight days—twenty-five and a half weeks. "On a trial that took place some years since at Edinburgh, for stealing subjects, where the body had been interred nine weeks before the recognition, Dr. Barclay, the anatomist, testified that the longest time he ever knew during which the features remained recognizable, was a fortnight. Yet a witness swore particularly to the identity of the body." (Beck's Med. Jurisprudence, Vol. II., 12th ed., page 49.)

The *stomach* had been removed and preserved in a glass jar.

The testimony of Dr. McIlwain, the defendant, was in substance as follows: Miss Foorman called to consult me at three different times in the latter part of October, 1875, in regard to the cessation of her menses. She admitted the possibility of pregnancy. I refused to give her medicine; and at the last interview she requested me to visit her mother, and have a conversation with her on the subject, which I did. Her mother supposed her to be three or four months advanced in pregnancy; and stated that Nathan Smith and her daughter were engaged, but she preferred that she should not marry while in that condition. I refused to furnish any means for procuring an abortion, and recommended that she be taken to the Home of the Friendless at Fort Wayne, where she could be cared for during her pregnancy and confinement. I agreed to take her to Fort Wayne. I also had a conversation with Mrs. Foorman's son John, about the arrangement, and he and I went to her residence on the evening of November 8th, and brought Mary in a buggy to my house, where we arrived about ten o'clock. Being hindered by business, I could not leave, and she remained at my house for three days. On Thursday, November 11th, at ten o'clock A.M., Mary had a chill, and a second at four o'clock P.M. I made no particulrr examination, as I supposed it to be ague. She complained of feeling cold, and I placed an additional quilt upon her. I left the room and returned in about half an hour; she still complained of feeling cold, and asked for more covering. I went in again in a few minutes and found her shaking; muscles rigid. I then went and brought Dr. Manzer. I made no close examination, but found her pulse rapid. She was in spasms, hands clenched and arms rigid. Did not examine pupils. She complained of nothing but cold, and called frequently for water. She continued in about that state until she died. She was conscious until a few minutes before she died. After death blood issued from her mouth and nose. There was no hemorrhage from her at any time while in my house, except from mouth and nose, and no stains in the bed where she lay.

Dr. Manzer testified in substance as follows: Felt her pulse, and found it from 100 to 130. Her face was flushed, eyes more or less protruded, and pupils dilated. I asked Dr. McIlwain what he had been doing, and he said nothing. She had a number of spasms after I arrived. I asked her what she had been taking, and she said oil of tansy and oil of savin. After death her features were natural. After we had buried her and returned to Dr. McIlwain's house, I saw a broken goblet in the room which the deceased had occupied. There was something in it; did not know what it was—a dark fluid, with a small amount of white precipitate at the bottom; it was bitter to the taste and odorless. I believe she died from strychnia poisoning. Was not aware that convulsions attend death from hemorrhage.

The girl died at six o'clock P.M., eight hours after the first chill. During all this time they state no effort was made to administer an antidote, or in any way alleviate her sufferings.

Dr. McIlwain further stated: I never attempted an abortion upon Mary by any means, and do not know from my own personal knowledge that she was pregnant.

The body, the night she died, was secretly buried by the two physicians and Robert Brandt.

With this general history, we are now prepared to consider the medical evidence bearing upon the case, and will first take up the question, *was Mary A. Foorman pregnant?* Nearly all the medical witnesses concurred in the opinion that she was. The principal reasons for thinking so were as follows:

First. The appearances of the uterus. It was enlarged, being seven and a half inches long and four and a half inches wide, and weighed seven and a half ounces avoirdupois. Taken in connection with other symptoms, the physicians for the State, namely, Drs. W. C. Ransom, of Hartford; T. B. Harvey, W. B. Fletcher, and W. M. Bullard, of Indianapolis; G. D. Leech and G. W. H. Kemper, of Muncie, considered this condition produced by pregnancy. The physicians for the defense, namely, Drs. H. C. Winans and T. J. Bowls, of Muncie, denied the pregnancy, and attributed the enlargement of the uterus to post mortem changes, or probably to hæmatometra. Dr. Winans thought the enlargement was caused by stretching, due to the generation of gas within its cavity caused by the process of decomposition. That the hypothesis of post mortem changes was untenable, is apparent when it is remembered that the entire body was in a comparatively good state of preservation, and the uterus is well known to be the last organ of the body to decay.* Again, there was no good reason for supposing a hæmatometra. Acquired imperforation of the vulvo-uterine canal is rare, even in multipara. Her mother stated that menstruation began at the age of fifteen, and continued regularly until August preceding her death, so that from that time until her death she could not have passed over more than three or four menstrual periods; and furthermore, sexual intercourse was acknowledged by her lover.

Second. A well defined spot, situated on the left side of the fundus, at which point the uterine wall *was thinner*, and opening into which were four or five sinuses that were readily inflated with a blow-pipe by Dr. Fletcher, was called by the physicians for the State a placental site. Drs. Winans and Bowls denied and pronounced it a "decayed spot." Both of these gentlemen affirmed that the uterine wall was *thicker* instead of thinner at the placental site. Dr. Bowls said that he would expect to find the walls of the uterus, at the fifth month, one to one and a half inches thick, and the placental site very much the thickest. As this is a point of some importance in medico-legal cases, and but little assistance rendered by the books, I would call attention to a recent examination by Dr. Fletcher, where it is conclusively shown that the placental site is *thinner*.†

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* "It is worthy of remark that the uterus resists decomposition more than other internal organs. In a case in which the body of a female, who had been missing nine months, was found and examined, although all other parts were completely decomposed, the uterus was of a reddish color, firm in structure, and its parts were recognizable, so that Casper, who examined the case, was able to affirm that the female was not pregnant at the time of her death." (Taylor's Med. Jur., 5th Am. ed., p. 545.)

† American Practitioner, April, 1877, p. 226.

Third. Another point of importance was involved, namely, the value of the microscope in determining, so long a period after death, whether the woman had been recently delivered. Dr. Flether, by this instrument, found the walls of the uterus denuded of mucous membrane, and considered that this was a proof that the woman had been recently delivered. He considered this evidence strengthened from the fact that he found the mucous membrane of the cervix present, and in a good state of preservation, and that the mucous membrane of the mouth and intestines was well preserved. Dr. Winans examined with a lens of sufficient "power to exhibit the fiber in white writing paper," and affirmed that he found the mucous membrane of the body of the uterus intact, except at one point in the upper part and to the left, which he designated the "decayed spot." He admitted that delivery at the fifth month is always indicated by the shedding of the mucous coating. Dr. Bowls also thought the mucous membrane was present even at this time (December, 1876), and yet in a short time he declared that the uterus was so much decayed that he was in doubt whether the enlargement was due to the retention of blood or not. Likewise, Dr. Winans stated, on the cross examination, that the uterus was in an advanced stage of decomposition. Query: If there was any putrefactive changes at all of the uterus, would not the mucous membrane yield first?

Fourth. The dilatation of the os—about three-fourths of an inch—was regarded by the physicians for the State as evidence of recent delivery; those for the defense asserting that it resulted from hæmatometra.

Fifth. Another point at issue was in regard to the structure of the uterus. Drs. Winans and Bowls affirmed that there was no muscular tissue in the unimpregnated uterus, that it is "simply a connective tissue" (Winans); "a potential fiber" (Bowls). According to Dr. Winans, no fibers were visible in this uterus; *ergo*, it was unimpregnated. Further on in his testimony, when describing the depth of the "decayed spot," he forsook his theory and said: "Its deepest portion was in a plane with the outermost layer of the muscular tissue." Question by Mr. Ryan: "Through the muscular coats? Answer: "Yes, sir; and partially the third." Dr. Fletcher showed the difference, which was merely one of development, between the muscular fibers of the unimpregnated and of the impregnated uterus; and demonstrated that the fibers of this uterus corresponded in size and appearance with the latter.

The next question involved is the *cause of death of Mary A. Foorman*. Upon this question also the physicians for the State and those for the defense failed to agree. We will first consider poisoning as a cause. There is no evidence to this effect, except the statements of Drs. McIlwain and Manzer. Drs. Winans and Bowls, basing their conclusions upon this testimony, gave an opinion that she died from strychnia poisoning. On the contrary, Dr. W. M. Bullard, who analyzed the stomach, testified that the organ was empty, healthy, and well preserved. The proper tests known to chemists were applied for strychnia as well as the other usual poisons. No trace of any poison was detected, and he gave an opinion that none was present. He cited cases where arsenic and strychnia had been detected in the dead body after a much longer period than had elapsed in this case, thus proving that poison would have been detected had it produced death.

We next proceed to notice the uterine lesions which might point to a cause of death. Dr. Harvey, who examined the uterus on the 6th day of September, 1876, testified that it was well preserved and healthy, except that the mucous membrane of the body was absent, and that the neck or mouth had been considerably lacerated, indicating instrumental violence. He thought the uterus had been impregnated and the fœtus had been expelled by mechanical means. He thought hemorrhage was the immediate cause of death. In the main, the physicians for the State concurred in these opinions.

I have not deemed it proper to add the testimony of nonprofessional persons, as it was the medical side of the question I desired to consider. I will state, however, that evidence was adduced confirmatory of pregnancy, as well as the production of abortion. The very manner of disposing of the body is stamped with guilt, and the lashing of a guilty conscience in John Foorman, brother of the deceased, who was cognizant of all the facts, would not let him rest, and he eventually confessed all, adding additional proof to the maxim that "murder will out."

The jury returned a verdict of guilty, and sentenced Dr. McIlwain to the State prison for two years.—*Am. Practitioner.*

CASES ILLUSTRATING THE DIFFICULTIES IN DIAGNOSIS AND TREATMENT OF ANEURISMS OF THE LOWER EXTREMITY.—*By John R. Roberts, M.D.*—Internal aneurisms are proverbially difficult of accurate diagnosis, and their treatment is likewise fraught with uncertainty and risk. Similar lesions of the extremities, it would seem, ought to present much more characteristic symptoms and be in a greater degree amenable to medical and surgical treatment. The numerous mistakes that have been reported by experienced observers, however, show that this is not the case, for, notwithstanding the comparatively superficial position of the arterial trunks in the extremities, aneurismal dilatations are very serious lessons for the surgeon to attack. In the *American Journal of the Medical Sciences* for 1874, Dr. Stephen Smith has given us an account of a large number of cases where it was impossible to make an absolute diagnosis for or against aneurism until the question was solved by the result of treatment, or by the investigation of the pathologist after death. Again, Dr. Erskine Mason, in the same journal for January, 1877, reports a case in which he ligated the femoral artery for a case of supposed popliteal aneurism, but which was subsequently determined to be a sarcomatous growth. In the *Philadelphia Medical Times* for March 21, 1877, I recorded an instance of spontaneous aneurism of one of the branches, of dorsalis pedis artery, where there was great doubt as to whether the tumor was aneurismal or a ganglion receiving impulse from the subjacent artery. Professor Gross, at whose clinic the patient applied, cut down upon the small tumor to establish its nature, and, finding it to be an aneurism as suspected, enlarged the wound and ligated the anterior tibial near the ankle. Secondary hemorrhage supervened, and the artery was tied a second time higher up; but the patient died some days later, apparently from pyæmia.

Several somewhat similar cases have occurred recently in the wards of the Pennsylvania Hospital, which are of interest on account of the obscurity of diagnosis and the various methods of treatment adopted.

The first case was that of a large popliteal tumor, occurring in a negro aged 26 years, which presented few of the characteristics of aneurism, and yet, from the result of treatment, must be considered as such. The patient four years previous to admission had observed a swelling in the right ham, after having, he says, received a strain. He had no marked trouble until about two months since, when he found the tumor increasing; and three weeks ago this compelled him to resign work. There was no history of syphilis. On admission the right knee was semi-flexed, and the popliteal space was occupied by a large mass extending more to the inner side of the limb; the length of the tumor was seven inches, and the girth of the limb over the patella about nineteen inches. There was no pulsation and no thrill in the tumor, which was the seat of pain, and ausculation over the inner side revealed no murmur. The ear at this examination was unfortunately not applied to the outside of the mass. The tibial arteries could not be felt at the ankle. Over the heart there was heard a systolic murmur, probably the result of an attack of rheumatism which he had six years previously. The diagnosis lay between aneurism, deep abscess, and some heterologous growth, and in order to clear up the case an aspirating trocar was inserted into the tumor.

A stream of blood, which rapidly coagulated, flowed from the tube, but not in jets; there was no pus mixed with the blood, and pressure on the femoral did not immediately check the flow, though compression continued for some time, did seem to do so. The inguinal glands were enlarged, and the saphenous vein was somewhat distended. The day after the tumor was thus tapped, ausculation revealed a distinct, harsh, systolic murmur, heard especially over the outer aspect of the tumor, though it was also perceptible on the inner side of the leg. When the superficial femoral artery was compressed for some time, the swelling in the ham became much less tense and diminished in size. This was further tested by applying the Esmarch bandage and cutting off the circulation for five minutes, when the tumor became very much softer and the girth decreased one-half inch. An attempt to determine the difference in temperature of the feet was not very satisfactory.

It was plain that there was a hemorrhagic tumor in the popliteal space, for the result of the tapping was conclusive on that point. The needle had either entered into a hemorrhagic cancerous growth or aneurism. Which was the true condition was hard to determine; without the aspirator needle even this much would not have been decided, for the murmur could have readily been caused by pressure from any solid growth compressing the popliteal artery. The question of treatment had to be mooted, and was equally unsatisfactory. If the growth were cancerous, early amputation was the safest course; if aneurism of sacculated variety, ligation or compression was indicated; but if it were a dissecting aneurism, amputation might be required primarily, or secondarily after some less heroic procedure had been attempted. At the consultation the propriety of controlling the circulation and making an incision down to the tumor was discussed, which would give more certain data; for if the trouble were aneurismal, suppuration of the sac requiring free incission was not unlikely to occur whatever operative procedure were undertaken, and should the swelling be cancerous the wound would not be contra-indicated.

Finally, Dr. R. J. Levis, under whose care the patient was, decided to ligate the femoral artery in Scarpa's triangle and await results, as this was a more conservative procedure than amputation. This was accordingly done with a carbolized catgut ligature, and the wound closed. The murmur of course immediately ceased, but no marked dimunition in the size of the tumor occurred. The swelling, however, became very soft and fluctuating, so that it was confidently thought that suppuration within the sac of the supposed aneurism had taken place; and it was decided to withdraw some of the fluid with the aspirator. By accident this was postponed and the tumor never punctured. Very gradually the tumor then began to diminish, and the patient, who had been in good condition and had had little or no pain in the knee after the ligation, regained the use of the limb, and was discharged two months after the operation with only slight swelling remaining.

The second case was in the ward of Dr. William Hunt, and was very different from the first, in that the diagnosis was easily made and the result unexpected.

A man, aged 40 years, whose occupation compelled him to climb awning-posts a great deal, had received years ago a gunshot wound of the inner side of the right leg, near the middle, where a small cicatrix could be seen. His friends say he had a partially-stiff knee for years, though he seems to think that he felt no pain until a week before admission, and he only relinquished work three days ago. On account of the patient being absolutely deaf, it is difficult to obtain an accurate history of the disease.

Examination showed a tumor, the size of a small orange, situated posterior to the head of the right tibia, which was the seat of an expansive pulsation, a distinct thrill, and a loud systolic murmur. Comprehension of the femoral at the groin caused these signs to disappear. The girth of the left leg at the same point was eleven and a half inches, while that of the right was thirteen and a quarter: when the circulation was cut off by pressure, the measurement fell to twelve and a quarter inches. No cardiac murmur was detected, and there was no history of syphilis. The radial artery did not appear atheromatous, and the dorsal artery of the foot was thought to be pulsating.

This, then, was a typical case of aneurism, and seemed to be a sacculated one, connected with the lower portion of the popliteal or one of the tibial arteries. Treatment by compression was deemed eminently adapted, as forced flexion exerted no influence, because the aneurism was below the joint and opposite the head of the tibia. This method was preferred to ligation, partly because of the success attending a case of external iliac aneurism treated by complete compression by Dr. Levis in the hospital in 1871. In this instance, according to Dr. Levis' report, published in the *Philadelphia Medical Times*, about a year later, the patient was kept etherized for five hours and a half, during which time the vessel was completely controlled by the pad of a compressor placed three and a half inches above Poupart's ligament. In the case before us, then, Dr. Hunt determined to try compression, and the pad, placed near the apex of Scarpa's triangle, was retained in position for twelve hours. During the first five or six hours the current was almost if not entirely arrested, because at times no pulsation whatever could be perceived in the tumor, though occasionally it was feebly felt. During the last half of the time, however, pulsation was marked, but I, who had the immediate supervision of the treatment, was afraid to increase the pressure lest gangrene should supervene, and determined to maintain partial occlusion for the rest of the time. Partial flexion of the knee was also employed, and the patient kept well narcotized. Subsequently the pulsation seemed diminished, but, owing to the inflammation of the skin caused by the instrument, no further pressure was applied. Forced flexion was continued without any change taking place. Twenty days later the compressor was again applied to the femoral, and the man enjoined to keep it screwed up as much as he could bear, but to relax the pressure occasionally when the pain oculd not be endured. This was treatment for two days, when it was found that the thrill had disappeared and that the pulsation was so feeble that at times it could be no longer certainly felt. The bruit remained. The tourniquet was used for a day or two longer in the same manner, but omitted at night. Consolidation was evidently taking place, and everything looked propitious; but soon a cloud appeared on the surgical horizon. On the fifth day after the patient began to use the compressor to produce partial arrest of the arterial current, swelling of the leg and great pain in the ham occurred. All compression was discontinued, and the limb enveloped in anodyne lotions. About the same condition of things lasted for four weeks: the swelling decreased a little and the pain gradually diminished, while the tumor was the seat of such feeble pulsation that it is impossible to state whether any actually existed. There seemed every reason to suppose that suppuration was about to occur in the aneurism, which had become filled with clot; but fluctuation did not present itself. At the end of this period, blebs appeared on the surface of the leg, and there were developed rather sudden symptoms of incipient gangrene, beginning in the neighborhood of the ankle. Further conservation was useless and delay hazardous, and accordingly, after consultation, amputation of the thigh was done six inches above the knee joint. Dr. Longstreth, the pathologist of the hospital, found the posterior tibial region filled with over a quart of laminated and soft black clot, which had pushed aside and forced itself into and around the muscles. No structure could be identified as a vessel or aneurismal sac. The popliteal artery, as far as the middle of the space, appeared normal, and then passed into the mass of clots. The head of the tibia and the bone just below were somewhat roughened, and a portion of the periosteum was removed. No bullet was found imbedded in the tissues, and at the time of dissection the parts presented no evidences of suppuration.

This was evidently an ordinary sacculated aneurism, which at some period of the treatment ruptured and became diffused. The symptoms of the trouble were so characteristic and decisive when first examined, that it seems certain that the aneurism was not diffused at that time; but after partial consolidation of the tumor had occurred, the weakened walls gave way and allowed extravasation among the muscular structures of the calf. This probably took place at the time when the limb rather suddenly became swollen and painful, during the use by the patient himself of partial compression. A case very similar to this was reported at a recent meeting of the New York Pathological Society, where a diffuse aneurism of the anterior tibial artery was followed by gangrene, necessitating amputation, and in which the first diagnosis of the case was cellulitis of the leg. In the present instance, it is impossible to say why the sac ruptured after partial consolidation of the aneurismal contents and a diminution of the blood-current had been effected by pressure upon the femoral; and yet it would appear that such was the fact. The patient, after the amputation of the thigh, did well, and was discharged cured.

A third case of aneurism was admitted by Dr. Levis on March 12, 1877.

The patient, aged 58, while, at work, nine or ten months previously, observed a swelling in the right groin, which always pulsated, and which increased gradually until it was as large as an orange. According to Dr. Hand's notes, the man gave no specific history, and said that the trouble was noticed after a hard day's work. The aneurism extended from one inch above Poupart's ligament down to the apex of Scarpa's triangle, and from the pubic symphysis outward to the ilio-pubic eminence. Pulsation could be felt when the fingers of the examiner were seven and a half inches apart. The dilatation therefore involved the iliac and femoral arteries just as the vessel passes from the abdominal cavity upon the thigh. In order to avoid, if possible, the ligation of the external iliac artery, it was determined to introduce a quantity of clean horsehair into the sac to favor deposition of fibrin and the consolidation of the aneurism. This method of treating aneurism was adopted in a case of thoracic aneurism by Dr. Levis some years ago, and would possibly have been successful if the tumor had not been of the diffused variety instead of sacculated, as was supposed. A long, delicate trocar was thrust into this ilio-femoral aneurism, and four long pieces of horsehair introduced through it. The trocar was then withdrawn in order to leave the hair curled-up in the sac. Unfortunately, however, two peices, being entangled in the trocar, were dragged out with it, leaving within two pieces which measured each about sixteen and a half inches. In the course of three or four days the pulsation seemed slightly diminished, as though there was beginning fibrinous deposit, but at the same time inflammation of the overlying skin, tending towards sphacelation, occurred, and the sloughing threatened to open the sac. The patient stated that a somewhat similar attack of cutaneous inflammation had occurred once before. The danger of rupture of the sac from sloughing and fatal hemorrhage was so great that it was determined to wait no longer for the horsehair to induce coagulation, but to ligate the external iliac artery. Accordingly, four days after the introduction of the hair, an incision was made, from the crest of the ilium to within an inch of the pubic symphysis and half an inch above the crural arch, and a carbolized gut ligature applied. The patient showed symptoms of peritonitis afterwards, and died on the eleventh day subsequent to ligation. No autopsy was obtained, but the sac was opened, and the hairs and a mass of soft black clot found therein.

These three cases are worthy of study as showing the variety of phases that may be assumed by apparently simple and uncomplicated cases of aneurism. In the second case, cure seemed almost accomplished, but the rupture of the sac necessitated amputation by inducing gangrene; the third case unexpectedly required ligation on the cardiac side of the tumor, on account of sloughing of the superficial structures; while patient number one, when amputation was deemed almost the only chance of recovery, was cured by a simple ligation, without any bad symptoms.—*Med. Times.*

Editorial.

PHYSIC FOR UTERINE DISEASE.

Most physicians, and *all* their patients, have been disappointed and disgusted with the result of the iron, assafœtida, opium, bromide potassium, and digestive tonic treatment used for months and years in chronic uterine disease. A practitioner who has proved the uselessness of this everlasting medication constitutionally, as it is termed, cannot conscientiously continue the practice. He well knows the fees obtained for prescriptions made without any hope of permanent benefit, where such benefit is expected by the patient and friends, are not just, strictly speaking. We may quiet our conscience by the reflection that we have done the best *we can* for one who requests and insists upon our services, but for the conscience of those who know there are local means, if properly applied, that will arrest the disease, this is not sufficient. If permanent relief can be afforded, it is our duty to give the patient the benefit of it. If we have not sufficient mental energy to make ourselves acquainted with the plans of successful treatment, or the physical industry to carry them out, we certainly act unjustly toward those who confide in our honor and faithfulness. Our physical inability to undergo the labor of such treatment, along with the arduous duties of general practice, is not valid excuse for drugging for years the unfortunate subject of such disease. There are those who will give them the necessary treatment, and by retaining them under our charge when it is not intended to give them the proper treatment, we not only exact money for useless service, but become responsible for the continuance of a disease which becomes more and more difficult of cure in proportion to the length of time it exists.

This, to our mind, is a sad picture; but our grief is greatly intensified by the course a few of our medical brethren think proper to pursue. They not only refuse practical familiarity with any plan proposed for curative treatment, but ridicule the idea of such plan to their patient, in order to change any inclination she may have to seek relief by rational means.

Moreover, we have been pained recently by the perusal of a usually well conducted medical journal, in which, editorially, a series of articles appears, evidently intended to discourage and ridicule those whose labors have been constantly, for many years, directed to the relief of suffering females. It is certainly praiseworthy in a journal to attack any unjustifiable and injurious plan of treating disease, and particularly one fraught with so much delicacy as that under consideration, but to pronounce against the merits of an instrument or course of management, which has been the subject of laborious study and practical test by a man of scientific attainments and profound judgment, and that without any experience in the matter, is to use journalism against this sacred cause of humanity. We do not wish to be understood as impugning the motives of the editors, but the *Louisville Weekly News* has certainly struck a blow which, if heeded, will retard, to that extent, the progress being made in gynæcological science. The stem pessary to which the *News* alludes, may or may not be an important addition to the means of curing uterine disease. It is impossible, however, for the writer to have been entirely satisfied on this point, without testing, or, at any rate, without a more thorough study of the subject than he had time to have, after first reading a description of the instrument. We confess to being prejudiced against pessaries of all kinds, believing that many of them increase the difficulty they are intended to relieve, but should by no means condemn an invention of this kind without proper test of its benefits; and particularly would we hesitate to attempt by ridicule to paralyze the influence of those whose labors and advancement exceed our own, in this department of the healing art.

Every truly scientific man who devotes himself to the study of female diseases, should be encouraged by the press and the people in every proper way, instead of retarding his progress by slurs, innuendoes, and ridicule.

American Medical Association.—The twenty-eighth annual meeting of this body was held, as we learn from our exchanges, in Chicago on the 5th instant, and was opened by an address from Dr. J. Marion Sims, the retiring president. Dr. Bowditch, of Boston, the President elected at last meeting, was then introduced. Dr. N. S. Davis delivered the address of welcome, after which discussions were had on the following papers from Sections:

Administration of Quinine in Pneumonia, by N. S. Davis; Extirpation of the Uterus, by Dr. Kimball; Treatment of some Diseases of the Female Urethra, by Dr. W. H. Byrd; Certain Operations for Vesico-Vaginal Fistula, by Dr. Bozeman; Value of Extension in the Treatment of Fractures of the Femur, by Dr. Hodgen; Relation of Spiritualism to Medical Jurisprudence, by Dr. John P. Gray.

Second Day's Proceedings.—In Dr. Squibb's address on Revision of the Pharmacopœia, reference was had to the pamphlet of Dr. Wood opposing the revision by the American Medical Association. Dr. Squibbs urges it, notwithstanding the objections made by Dr. Wood.

The following papers from sections were read and discussed: Transmission of Enteric Fever by Dairy Milk, by P. G. Robinson; Neglect of Obstetrical Forceps, by Dr. J. P. White; Clinical and Meteorological Records, by Dr. N. S. Davis; Congenital absence and imperfect development of the Uterus, by Dr. Marcey; Strictures of the Urethra from Masturbation and its Pathological Significance, by Dr. S. W. Gross; Medio-Bilateral Lithotomy, by Dr. W. T. Briggs; Treatment of Fractured Ribs by Extension and Expansion of the Thorax and Retention by Plaster of Paris Bandage, by Dr. Lewis A. Sayre; Do Facts Justify the Recognition of Moral Insanity as a Distinct Form of Mental Disease? by Dr. R. J. Patterson.

Third Day's Proceedings.—The Treasurer reported a small surplus, but unusually heavy expenses during the past year.

The Committee on Publication urged the employment of a medically educated stenographer.

The Committee on Prize Essays reported the reception of only two, neither of which was worthy of a prize.

The question of Revision of the Pharmacopœia was discussed again, but finally the whole subject was tabled.

The following officers were elected: President, T. Y. Richardson of Louisiana; Vice-Presidents, Drs. White of New York, Green of Illinois, Russell of Connecticut, and Dunlap of Ohio.

The report of Drs. J. J. Woodward, U. S. A., and Edward Seguin, on the progress of uniformity in the means of observation and record, was submitted.

A resolution was adopted favoring the passage of the "Morrison Bill," now before Congress, repealing the tariff on quinine.

Buffalo was selected as the next place of meeting, on first Tuesday in June, 1878.

AMERICAN MEDICAL COLLEGE ASSOCIATION.—This institution was permanently organized at the meeting in Chicago, on June 2d.

Prof, Biddle, of Jefferson Medical College, was made President; Prof. N. S. Davis of Chicago, Vice-President; and Prof. Connor of Chicago, Secretary and Treasurer.

Constitution, by-laws, and articles of confederation were adopted. The by-laws provide that colleges may have membership in the Association or merely affiliation, on certain terms and conditions.

About twenty-five colleges were represented at the meeting, and most of their delegates signed the constitution and by-laws and articles of confederation.

It is believed that but few, if any, of the colleges will fail to affiliate, as the terms are so arranged as to make a fair compromise between colleges entertaining views at variance. Our next issue will contain the constitution, by-laws, and articles of confederation, which our space will not allow in this number of the JOURNAL.

WE HAVE before us a notice of the first annual meeting of the American Dermatological Association, which is to be held at Niagara Falls, on the 4th day of September next.

For the benefit of the profession, and for the advancement of dermatology in America, it is very desirable that this enterprise be a success, and the best way to insure this result is for every one to make manifest the interest they may feel.

The titles of all papers to be read at any annual session shall be forwarded to the Secretary not later than one month before the first day of the session." (By-laws sec. iii.)

The officers of the Association are: James C. White, M.D., President; Louis A. Duhring, M.D., Robert W. Taylor, M.D., Vice-Presidents; L. Duncan Bulkley, M.D., Secretary.

WE ARE glad to see among our exchanges a copy of the *Maryland Medical Journal*, edited by Drs. Manning and Ashley, of Baltimore. It is gotten up in nice form, and is replete with valuable information. May success attend it.

EDITORIAL CORRESPONDENCE.

Cross Keys, Ga., May 15, 1877.

Editors Atlanta Medical and Surgical Journal:

I send you the following history of a case, which, to me, was an exceedingly interesting one during its progress.

On December 20th, 1876, I was called to see a colored boy, aged sixteen, and found him suffering excruciating pain in the umbilical region, with vomiting. I was informed that he had suffered a few days previously with diarrhœal discharges, which on the day before (15th) had suddenly ceased on carrying a heavy luggage to a neighboring house. His bowels had not been moved since the sudden arrest twenty-four hours before.

Finding no strangulated hernia to account for the symptoms, I adopted the usual treatment for painful cramp or spasm of the alimentary canal, without benefit. Opiates and enemas in large amount were used, without relief from pain or causing any fæcal discharge from the rectum.

Notwithstanding the frequent injection of large quantities of warm water into the colon, the stricture remained complete until the 25th, five days after treatment was commenced, when for the first time fæcal odor was detected. The discharges continued afterwards, and the patient gradually improved in every respect. On the 3d day of January, fourteen days after the attack, an obstruction was detected in the rectum, and with slight interference, a portion of the small intestine eighteen inches long was discharged. I have the specimen carefully preserved in alcohol, which I propose to exhibit as evidence of the curative power of nature.

The boy improved rapidly after the escape of the invaginated portion of bowel, and is now in good health.

On examination of the discharged portion of intestine, I find that it is a part of the small bowel, and on the internal or mucous surface a growth the size of a filbert, consisting of tough fribro-cartilaginous substance. This probably in some way led to the intussusception. Adhesion of the serous coat at the point of invagination doubtless prevented the escape of fæcal matter into the cavity of the peritoneum, after sloughing of the strangulated portion of bowel.

To me this is a remarkable case. Remarkable for the amount of intestine involved, and for the complete recovery by natural process. Strictures occur frequently, and are often attributed to intussusception, when there is no positive evidence of this condition. In this case, however, we have positive proof in the discharged portion of bowel.

C. C. Hart, M.D.

Larned, Kans., May 25, 1877.

Editors Atlanta Medical and Surgical Journal:

I was very much interested in the communication in the last number of your journal, from Dr. W. A. Adams, of Bryan, Texas, concerning an epidemic of roseola. Though nearly 800 miles north of Bryan, and in quite a different climate, yet for two months we have had a similar epidemic in this city. The eruption generally extends from crown to sole, and the diameters of the circles vary from one-eighth to one-half of an inch. Itching is, almost without exception, from the appearance to the final disappearance, a prominent feature. The eruption generally lasts from three to five days. The tonsils, submaxillary and lymphatic glands are generally enlarged, as in the cases of Dr. Adams, and deglutition more or less painful. While it has not appeared so prevalent in adults as in children, it has been more stubborn in the former. Out of perhaps twenty who have been under my personal observation and professional care, not one has died; yet a few deaths have occurred from what the attending physicians pronounced measles and scarlatina.

My treatment has been intended—after regulating the secretions, which are generally scanty, by giving a dose of calomel at the beginning—to keep the bowels open with mild laxatives, such as cream tarter and sulphur, and to keep the patient more or less under the influence of opium; preferring Dover's powder, on account of the ipecac contained therein. As to the "anasarca" which Dr. A. spoke of, I have not witnessed a single case in my practice, nor have I heard any doctor in the city speak of it, in which the cause was attributed to a previous attack of the skin disease.

Now, why do ten per cent. of those who suffer from the disease in Bryan have dropsy as a sequel, while here we are entirely rid of it? Is the disease different? With the exceptions above mentioned, the symptoms are the same as described by Dr. Adams. Is it due to difference in climate? It is much colder here, and the atmosphere drier and lighter than in Bryan. Or is it due to difference in treatment? though our treatment was not intended as anti-dropsical or in anticipation of same. Is roseola prevalent over the country as an epidemic?

Respectfully, W. H. Hardison, M.D.

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The Cure of Rupture, Reducible and Irreducible; also of Varicocele and Hydrocele, by New Methods. By George Heaton, M.D., member Massachusetts Medical Society; Fellow of the Royal Chirurgical Society of London; of the Westminster and London Medical Society; of the Parisian Medical Society of France, etc. Arranged and edited by J. Henry Davenport, A.M., M.D., Harv. H. O. Houghton & Co., publishers. Boston. 1877.

The author claims in this to have done away with the unsatisfactory and dangerous procedures usually resorted to for the radical cure of hernia. Heretofore, in all cases in which this radical cure has been attempted, he claims that the ephemeral benefit obtained is in no wise comparable to the difficulties and dangers incurred.

The truth of this we are constrained to acknowledge, and could it be established that this treatment advised by the author is really calculated to prove satisfactory, and capable of modifying a heretofore dangerous undertaking into an innocent procedure, an inestimable boon will have been conferred on mankind.

The results promised by his manner of treatment are worthy, we should think, an investigation, and we therefore recommend the work to the consideration of those wishing to test its merits.

Pamphlets Received.—Tracheotomy in diphtheria. By J. H. Pooley, M.D., Professor of Surgery in Sterling Medical College, Columbus, O. From the June number *Richmond and Louisville Medical Journal.* 1877.

Viburnum Prunifolium (black haw); its Uses in the Treatment of the Diseases of Women. By Edward W. Jenks, M.D., Professor of Medical and Surgical Diseases of Women, and Obstetrics, Detroit Medical College. From vol i. Gynæcological Transactions. 1876.

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Original Communications.

A CASE OF STRICTURE IN THE MALE URETHRA OF TWENTY-FIVE YEARS STANDING—EXTERNAL URETHROTOMY—CURE.

BY R. W. WESTMORELAND, M.D., ATLANTA, GA.

In reporting the following case, I do not propose to present anything new, but certain peculiar features that may prove of interest to some. As is illustrated in this patient, simple affections, comparatively, are allowed, through neglect or ignorance, to develop most serious conditions, requiring heroic measures for relief.

Mr. W., of Campbell county, aged 58, the subject of the following report, from mechanical causes became the victim of stricture. According to his statement, when micturition first became difficult, he was advised by a physician to contract some venereal disease, in order that the cure of the original affection might be facilitated! In the advised treatment his case was of course made worse by additional cause of irritation, and which was still further increased by a false passage and the frequent attempts at introducing catheters. The stricture was complete so far as the introduction of instruments into the bladder was concerned.

In this state of affairs, his condition was deplorable. At each occasion of urination he would be subjected to the most distressing pain. His whole frame would tremble with the effort, and he would finally accomplish the act—was left as helpless as a child.

Finally he came under the treatment of a more rational physician, who attempted assiduously the introduction of filliform bougies, in the hope of relieving by gradual dilatation. His failure in this was owing, no doubt, to the tortuousness of the canal, resulting from the false passage before spoken of. At least this assisted in the difficulty, while there were other troublesome factors, to be spoken of. Having undergone this manner of treatment for six weeks or two months without any benefit, he lost hope. Gradually he failed in strength, and severe rigors, indicating the fatal progress of his affliction on the constitutional powers, supervened. He was an exhibition of an almost complete wreck of a once strong and vigorous man. On account of the implication of the kidneys in the irritation, he had to constantly dose himself with spirit nitre and buchu; otherwise his difficulty in micturition would be increased by the acrid and loaded condition of the urine, resulting from abnormal renal action.

In this condition, after suffering more or less for twenty-five years, he came under my treatment. Upon careful exploration, I found that it was impossible to introduce any kind of an instrument through the obstruction into the bladder; and both from my own experiment and the efforts that had been made in this line before me, I decided to abandon all idea of dilatation, and resort to incision.

I discovered a circumscribed tumor at the spongy portion of the urethra, just anterior to the subpubic curve. A perceptible increase of size in the tumor could be noticed on micturition. No fluctuation was perceptible, but upon the forcible injection of oil during my effort to introduce a bougie, much relief was afforded in urinating, and the volume of the tumor was much diminished.

A grooved director being passed down to the anterior border of the tumor, as far as it could be insinuated, and the scrotum pulled well up on the pubis, the patient being in the lithotomy position, a free incision was made down on the point of the instrument. The tissue of the tumor was found to be very dense and gristley, and contained no urine, as far as I could discover. The stricture, situated just a little in front of the anterior margin of this tumor, was about half an inch in extent, dense, cartalaginous in structure, and very tough. The director was found to be not in the regular channel, but passed out into a false passage just anterior to the point of constriction. In the tumor was found a calculus about the size and shape of a small almond kernel, resting in a kind of cul-de-sac of the dilated urethra. This was removed, and, with a meatome, the the stricture was opened from behind forwards, and the director reintroduced through the natural channel into the bladder without further obstruction.

The peculiar feature that presented itself to my mind at this stage of the operation was the direction of the director into this false passage. When the stricture had been incised, the point of the instrument could pass as readily through the regular channel as it before had passed through the false one to the point where the stone was situated; but it could by no manner of persuasion be passed by the stone until it had been removed. Furthermore, no difficulty afterward occurred in reaching the bladder, the instrument seeming to have always struck the regular passage, and to have glided clear of the false one altogether. Had this not been the case, the opening at the point where the stone was situated would not so accurately have received the beak of the sound, and difficulty, for awhile, would have been experienced in its introduction.

It is needless to say that instant relief was the result. A catheter of suitable size was easily introduced, and, for the first time in ten years, his urine was drawn off. Up to the present time he has done splendidly; the incision healing kindly, and no unfavorable symptoms having made their appearance.

The gratitude of the old gentleman could not be expressed in words—he could only *look* it. The blank despair that had settled like an incubus upon his mental being had given place to ecstatic joy and hope. That which might have been done years before, was done at last, though after untold suffering and the most demoralizing misery.

It is such instances as this that should impress upon us the inutility, the injury of temporizing with any one mode of operating in stricture, or allowing foolish timidity to rob us of the golden fruits arising from a timely and rational surgical interference.

THE NARROW MEATUS—HOW PRODUCED.

BY JNO. THAD. JOHNSON, M.D.,
Prof. of Anatomy and Lecturer on Venereal Diseases in the Atlanta Medical College.

(An Essay read before the Atlanta Academy of Medicine.)

In the January number of the ATLANTA MEDICAL AND SURGICAL JOURNAL, I presented a short article on the Narrow Meatus as a Cause of the Stricture of the Urethra I will here speak briefly of the mechanism of formation of this abnormally small opening.

Surprise, or doubt, is occasionally expressed by physicians at the frequency of this malformation; they seeming to regard this opening as determined by a fixed law of nature, from which variations seldom occur. Almost every portion of the anatomy of the body is subject to malformation of deficiency or redundancy. Certain structures suffer in this way more frequently than others. This is true of a class known as middle line deformities, and of the mucous outlets of the body. A deformity very frequently met with is the deficiency on the under surface of the anterior portion of the male urethra—a hypospadias of limited extent. This seems to be owing in great part to a deficiency of the mucous covering of the glans.

On the other hand, we find the reverse condition obtaining at times; the mucous membrane being prolonged *too far* forward, leaving the opening of the urethra too little, instead of too much exposed, as in the condition just spoken of. If any one will carefully observe a small meatus of this type, it will be found that the abnormality is dependent on this mucous membrane occupying the inferior commissure of the termination of the urethra. By inserting an instrument—say a probe or small bougie—within the opening, and pressing it forward against the membrane, the condition is readily demonstrated. I have seen several patients whose meatus would barely admit a No. 1 bougie, in whom the deformity depended entirely on this process of membrane, the urethra itself being perfect. As a rule, though, even when the deformity is present, the membrane does not occupy so much of the opening as in the above instances.

In the normal meatus even, the extreme inferior commissure is occupied by this membrane, or fourchette. It requires but a very small mistake for nature to overstep the normal size, and extend the mucous covering higher up the opening. This seems very like the formation and the variations of that partial covering of the genital canal in the female, the hymen. This membrane occupies almost invariably the lower commissure of the vagina, is continued from the general mucous covering of the part, and, like the fold stretched across the termination of the male urethra, is subject to much variation as to the height to which it ascends on the opening.

It will also be observed that this mucous membrane, in the male, is a continuation, or expansion, directly from the frænum—the mucous layer of the prepuce being gathered into the ridge, or fold, known as the frænum, and it in turn expanding at the lower commissure of the meatus.

This congenitally small meatus, then, as above described, is not a true stricture of the urethra, in the sense expressed by that term; that is, *its structure is different, its mode of formation is different;* the one is a normal tissue, very slightly deformed or prolonged; the other is a new structure, a pathological formation.

The question has been asked, why may not a deep organic structure exist congenitally as readily as the small meatus? The above paragraph I give as the explanation. There may be found occasional cases in which the anterior portion of the urethra proper, the channel through the glans penis, is involved in a congenital constriction, but they are comparatively rare. They do not constitute that typical variety so often met with, and whose mode of production accounts for the many differences in the size of the meatus as compared with the calibre of the urethra, even within the limits of health.

I do not propose to speak here of diseases or symptoms depending on the malformation in question, further than allude to those disorders as set forth in the article in the JOURNAL, already referred to. Further observation has confirmed those views. It led me also to investigate the fact of there being so little relation between the size of the urethra and of that of the meatus.

This small meatus should not be confounded with an organic stricture, not congenital, which is so frequently found within one-quarter or one-half an inch of the meatus—and yet such confusion is made under the term of constricted meatus.

When the meatus is properly enlarged by the knife, and after-treatment conducted properly, there is but little danger of its returning to the former size. But when the true stricture just behind the meatus is divided, there will be subsequent recontraction, as occurs in strictures of other parts of the canal.

MANIA A POTU.

By H. L. WILSON, M.D.

(*Read before the Atlanta Academy of Medicine.*)

This is a subject by no means new to the present generation. Indeed we are told that as far back as the memory of man runneth, vinous potations have been indulged in to excess. Now, is the moderate use of the pure grape juice hurtful to mankind—when not contraindicted by disease? It seems there is nothing more grateful to the inner man, when worn down by fatigue and physical exhaustion, than a "pony" glass of wine. Some are even sure to smile and moisten their lips, as the eye sparkles upon the introduction of the capacious and flowing "schooner." It is not the prudent or judicious use of alcoholic fermentations that produces mania or delirium, but the continuous introduction into the stomach of vinous or alcoholic drinks, during days or weeks, thereby causing excessive stimulation of the cerebrum, which in turn causes cardiac excitement, creating an abnormal condition of the brain, as well as the entire circulation.

As the drinking continues, there is a disposition to congestion of the liver, with a general perturbation of all the secretions of the alimentary canal, while the kidneys are placed as it were, upon double duty, by this cardiac stimulation. We are usually sent for to see a patient when he becomes sick to nausea, tremulous, and sometimes dangerous, and the stomach positively refuses to receive any more of this "fire-water." In most cases we find an exceedingly penitent individual, constantly taking fluids, and as promptly rejecting them; the entire nervous system highly excited, giving one the appearance of general chorea; pulse from 120 to 130 or 140, causing a harsh, dry skin, parched tongue, with an intolerable thirst. Just here we are informed that the sufferer intends immediate reformation. He denounces whisky and all kindred drinks as a vile fraud, and declares his intention of becoming a blatant advocate of temperance for all future time, reminding you of the kind and confiding female, who so solemnly announces to her friends, during the act of parturition, that her first child will certainly be her last. And strange as it may seem, these positive and vehement declarations, are received with but a moiety of faith, by the older hearers, for the vow of the one is about as soon broken, as that of the other.

At this period I would prescribe, mild chloride of mercury, grs. xxx, with opium, gr. i, unless the liver had been long inactive from debauch, when we might with propriety double the dose of mercury. On seeing the patient again we are informed by him—probably in a whisper—that his chamber is infested with reptiles and animals, who, with their impudent and bleary eyes, are peering into his inmost soul. Sometimes he sees men with short legs, big feet, long bony arms, and immense eye balls, who solemnly march to and fro watching his every movement. Sometimes the patient becomes so desperate in his mental perturbations that he would commit violence under the belief that be was protecting his own life from assassination. Hence, caution is necessary on entering their apartments when they are alone.

Of course sleep is out of the question. In some instances opium and small doses of whisky will give them quiet and rest; but in my opinion it is best to abandon the alcoholic stimulant, and as soon as you get the desired action of the calomel, reduce the pulse with Norwood's veratrum: say three drops every two or three hours. However, we must administer with care or we may reduce too rapidly. As soon as we have it down to 75 or 80 beats per minute, I would give bromide of calcium, grs. xx, and at the expiration of one hour if no sleep, give chloral hydrate, grs. xv. Then if sleep be not induced in two or three hours double the dose of each, giving the latter *one* hour after the former as before. Good results often follow the use of mustard applied to the epigastrium, in allaying the irritability of the stomach. By the above treatment I think we may confidently expect the liver to be freely emulged, sleep and quiet produced, with re-established secretions, moist skin, normal mental condition, etc. I would then advise soups, iced milk, broth or toast-water until the stomach could retain more substantial food. I believe it is the *sudden* withdrawal of the cerebral stimulant which the brain for the time had been educated to receive, that produces the mental hallucination and phantoms that appear and vanish.

SYPHILIS.

BY FERDINAND KING, M.D., ATLANTA, GA,

(*Read before the Atlanta Academy of Medicine.*)

This disease has puzzled medical writers through almost four centuriès past, and still stands as a stumbling-block in the way of the most scientific of our profession. Even Hippocrates, Celsus, and other writers of their day dwelt at length upon its history, diagnosis, treatment, etc., but no two of these agree in toto upon the main points referred to in its discussion.

Its origin and history have been studied more attentively of late years than in the days of those writers just referred to, but in my opinion it is even now an unsolved problem. Being an advocate of that doctrine—however paradoxical it may seem—that every man has a right to his own honest opinion, I feel myself in no way bound to accept as true everything that is printed in our standard medical works; therefore I propose to advance an idea of my own in regard to the origin and history of syphilis. This may seem presumptuous in me, one whose medical sun is hardly above the eastern hilltops; still I plunge into the unfathomed depths, promising myself your indulgence in my efforts to reach a safe port. I claim no originality for any thing I may write, as I agree with the old adage, "There is nothing new under the sun." No discovery or invention is ever made perfect, or theory permanently established, by the originator thereof. Our ideas upon all things—whether physical, chemical, or medical—though they may at a glance seem original, are found, on closer investigation, to consist of the suggestions of others, perfected or made more available. Thus Jenner learned the secret of vaccination from his observations among the milkmaids of his time. Esmarch's bloodless amputation was suggested by the sight of a dying soldier, who had stopped the flow of his life blood by binding his arm tightly with his blanket strap. Brown-Sequard perfected his plaster of Paris apparatus or splint after seeing a similar contrivance made by a backwoods medical student whose name is unknown. And so with all other discoveries or inventions in our profession as well as in the arts. Hence any theory I may advocate or suggest, is the result of reading the writings of my predecessors.

In regard to the origin of syphilis, I have found no authority with which I agree. Bumstead and several others equally prominent in venereal, seem to think the disease originated about the close of the fifteenth century, or at the time of the invasion of Italy by the French army under Henry VIII.—these soldiers carrying the disease on this campaign. French writers defend their countrymen, and say the disease was unknown in France prior to this date, which was the years 1493 and 1494. Other writers, entitled to equally as much credit, assert that it was first carried to Europe by the crew of Columbus, on his return from his first voyage to the West Indies, in 1493. That the disease existed in the new world at the time of Columbus' second voyage, is a well established fact. As the discovery of America and the invasion of Italy by Henry VIII. took place simultaneously, and the friends of these countries—France, Italy, and America—defend their respective sections against the origin of this loathsome disease with Spartan courage, all our leading syphilographers seem to make no efforts to unravel the mystery prior to the time referred to. In other words, they decline, for some unknown reason, to go behind these ancient returning boards.

I believe that syphilis is almost or quite as old as history itself; that even the sons of Abraham and Isaac were not strangers to it; that it was intended by our Creator as a moral protector, as no man or woman ever was known to have the disease unless they had violated some law of morality. Even Moses laid down rules for the government of those afflicted with the disease, as is clearly shown in the 15th chapter of Leviticus. Though Bumstead traces the history of gonorrhœa to this same chapter, I claim the right to disagree with the learned venerealist in so far as appertains to the 32d verse of this chapter, treating of the subject of sores or running issues. The great law-giver closes by saying: "This is the law of him that hath a running issue, and of him whose *seed* goeth from him and is *defiled* therewith." As no one will pretend to say the seed of man is defiled by gonorrhœa, I think all will agree that reference is plainly established. Again, it is referred to in the 5th verse, 22d chapter of Exodus, part of which speaks of "visiting the iniquity of the father upon the children, even unto the third and fourth generations." I think the disease of olden times, referred to as lepra, was certainly tertiary syphilis, as this disease is spoken of in immediate connection with clap in 32d chapter Leviticus: "What man soever of the seed of Abram is a leper or hath a running (sore or) issue, he shall not eat of the holy things until he be clean." I could quote numerous other biblical facts to prove that the disease under consideration existed long before the Christian era (but known by a different name), did the limits of this paper permit. As the Almighty intended that "like should seek like," and that each nationality should multiply within itself, he visited this curse upon those who violated his laws, in the most remote ages.

Now, to give my theory in regard to the history or transmission of syphilis from generation to generation. I must be permitted to suggest an opinion that will no doubt meet the universal condemnation of this Academy—perhaps deservedly so, as I am not by any means authority on the subject. That opinion is this: that the virus of a chancroidal ulcer, when inoculated or transferred from one subject to another—Irish or German, for example—of different stock or nationality, produces pure, unadulterated syphilis. In other words, I claim that what is ordinarily known as diagnosticated chancroid is simply a mild form of syphilis. This may seem old time, nevertheless I think historical as well as common sense facts render the opinion worthy of credit. The disease (syphilis) when left among people of the same blood, and with the same temperament, disposition, etc., naturally tends to self-limitation or degeneration; just as intermarriages among members of the same family are followed by idiots and deformed offspring. No doubt the Jews, in the days of Abraham and Isaac, had syphilis, which, after coursing through the veins of several generations of their people, became almost inert, or in other words, degenerated into a local contagious ulcer of the genitals. As those people began to form new republics or governments at a distance from each other, a change of habits, temperament, etc., was the result, which soon made the different sections produce people entirely new to each other, thus furnishing new material or food for this treacherous disease. Then Europe was peopled. Some time after this the disease raged with renewed energy there. By the time Henry VIII. invaded Italy, the disease no doubt had become so weak that it was simply local. I expect the Italians were also subject to a mild form of it at the time Henry VIII. visited them. Being entirely a different people, syphilis soon found fresh material from which to derive new and more inflammable fuel for the flame to rekindle upon. I believe our authorities admit that chancroid or local syphilis existed both in Spain and France at this time (1493 and 1494). It is reasonable to suppose, then, that Columbus' crew carried their time-honored friend, chancroid, with them on their first voyage of discovery to the new world. As soon as they communicated it to the Indian there, it found rich, pure, warm blood from which to derive the necessary food for a regeneration. Consequently, upon the return of Columbus on a second voyage to the West Indies, he found syphilis "blooming like a morning rose." Recent reports from the surgeons in and around Philadelphia go far towards sustaining me in my theory. These physicians say that syphilis of a more serious character than ever before seen there prevails to an alarming extent since the Centennial. This I attribute to the visit from our trans-Atlantic brethren during the international exhibition, when Russians, Turks, Egyptians, Malays, and every known nationality under the sun mixed freely with our American people. You who have been called upon to treat syphilis among the newly-arrived Jews and Italians, fresh from their native country, will, I think, readily agree that it is more troublesome than when found among our own citizens.

But as I have already, I fear, given too much space to the origin and history of the disease, I must hasten on to its diagnosis, prognosis, and treatment. Of the former I need say but little, as you have all seen enough of it to become even more familiar with it than myself. The only point that requires *careful* attention and good judgment is in deciding whether to pronounce the ulcer to be the result of a poison that is strong enough to produce a constitutional effect, or is merely a local solution of continuity; or in other words, to say whether the disease is chancroid or chancre. This can easily be determined by inoculation—the former producing only a simple ulcer similar to the one from whence came the matter, while the latter produces little or no effect.

Syphilographers, for the sake of convenience, divide the disease into three stages—primary, secondary, and tertiary. We hardly ever, in my judgment, see a case of primary syphilis; and when we do, the symptoms are so obscure as to generally deceive us. These symptoms consist of depression of spirits, lassitude, or hypochondria, and more or less headache, confined principally to the cervical vertebra and occipital region. The patient at the same time suffers from constipation and heartburn. In this stage, I say, the patient seldom consults the physician. It is not until the chancre makes its appearance that he seeks medical aid. Then we have to deal with secondary or constitutional syphilis, even though the poison was inoculated upon a raw or abraded surface, for the blood makes its round through the entire system in a very few minutes, thus carrying the septic matter (for as such I regard this specific virus) to every vital part of the human subject. When this poison is so far removed from the original, or last fresh subject from whence it came as to become almost inert, then it is too weak to interfere with or overcome the efforts of nature in her own defense, save in or upon the genitals, where the weakest points are found; hence in these cases we find only local lesions or chancroid, yielding readily to direct or local treatment. And here I would remark, per parenthesis, that it is a good idea to always question your patient very particularly in regard to his general health and feelings during the few days preceding the time of his first consultation with you, or the first appearance of the ulcer he presents. If he has observed the headache, etc., as above referred to in symptoms of the primary stage, then you may safely pronounce the case one of constitutional or secondary syphilis. If you find that you cannot determine the nature of the disease by these inquiries, I see no harm that could possibly arise from the adoption of a constitutional treatment anyway, even though it may be merely a local or mild form of the disease.

If your patient is not inclined to deceive you by false representations, there is no trouble in diagnosticating tertiary syphilis, as it has certainly been preceded in nine-tenths of cases applying for treatment by primary and secondary symptoms. Then the peculiar symptoms of this stage of the disease are so marked and easily defined as to make their diagnosis quite easy. Syphilitic rheumatism, alopœcia, blotches, or papulæ upon the skin, chronic hard engorgement of the post cervical glands, as well as the inguinal, chronic or ulcerated sore throat, and general or perpetual depression of spirits are nearly always plainly observable. Even with all these the patient sometimes succeeds in deceiving the most expert surgeons. A man who has syphilis will tell lies on this one thing when his veracity on every thing else is unimpeachable. Sometimes we find our patients in this third stage, confirmed syphilomaniacs.

Of the prognosis of syphilis I have but little to say, from the fact that I have not been engaged in the practice of medicine a sufficient length of time to justify a fixed opinion. Although there has been no recurrence of the disease in patients treated four or five years ago, I have no evidence to prove that it will not break out anew at an early day. Whether a physician is justifiable in promising his patient a permanent cure is a question with rather an uncertain answer, in my mind. My plan is to cheer him up as much as possible. Sometimes I find it necessary to promise him a radical cure, thus stimulating nature in defense of her own domicil. I see no good reason why syphilitic virus may not be entirely eradicated from the human system in the same way that other septic material is expelled. Nature is a powerful adjuvant or co-worker in accomplishing such a purpose—expelling virus, as well as all other septic material, as her most uncompromising enemies; an arch fiend that should be like unto the seven devils that were so unceremoniously cast out of Magdalene of old. Perhaps we do not at present possess those remedies capable of accomplishing this purpose. If not, I think our profession, aided in the work by chemical and microscopical investigations, will come into possession of them at an early day. We must expect material aid from the intelligent physiologist, whose duty it is to familiarize the student with the chemical constituents of the various tissues that enter into the make-up of man.

We next come to the treatment of syphilis. The first thing to be spoken of in connection with this part of my subject is hygiene, without proper attention to which we cannot promise success to ourselves or our patients, however favorable or unfavorable the case may seem. The most important features in connection with the hygiene are *system* and the adoption of those sanative measures usually regarded so essential to the successful treatment of all disaeses arising from the presence of septic material, that invariably produces a depraved condition of that great life-giving and life-supporting fluid, the *blood*. The physician should try to impress upon the mind of his patient the importance of *regularity* in all his habits of life. He should have simple but nourishing food; abstain from the use of tobacco and whisky. If he is compelled from force of habit to have a stimulating beverage, an occasional glass of ale or porter may be permitted. The functions of the skin, kidneys, bowels, etc., should be carefully attended to, as these are the great avenues through which nature, aided by art, expels her enemies. He should take his meals regularly, sleep at least seven out of every twenty-four hours, avoid all sedentary habits, taking plenty of out-door exercise, and control his sexual desires as far as possible. This latter precaution should be carefully looked after, as syphilitics, like consumptives, oftentimes imagine the end is near; hence plunge into excessive venery. Hence the importance of endeavoring at all times to keep up a cheerful disposition.

The medicinal agents employed in the treatment of syphilis are numerous. Space will not permit me to speak of them separately at length; therefore I shall restrict myself to the consideration of those most usually recommended and employed. Mercury has for centuries past been regarded the sheet anchor in the treatment of syphilis. The use and abuse of this remedy alone would furnish material enough for a considerable volume. I am satisfied that the remedy is too often used empirically, from the fact that many who employ it frequently have very little idea of its specific effects. Some use it because their preceptors or "medical daddy" thought it cured all forms of syphilis, while others think there is no chance for improvement on the old dogma. With all due respect for my preceptor, who was a "mercurio-maniac," conscience prompts me to ignore his teachings, in so far as this agent is concerned. I am satisfied that we can treat the disease more successfully by the use of other less objectionable remedies. Mercury, we all know, when employed for any considerable length of time, acts as a depletory; it smacks smartly of homœopathy, I think, to employ it where every symptom calls for a tonic treatment. Instead of this remedy, the use of which is truly time-honored, I in all stages of the disease employ iodine, in combination with potassa and vegetable alteratives. The following prescription, I think, meets a majority of the symptoms usually met with in syphilis:

℞.—Pot. Iodide,	grs. 320
Ferri Phos.,	grs. 192
Syr. Stillingia,	
Syr. Helonias,	aa. f℥ij
Tr. Phytolac Dec.,	℥ss
Elixir Simplex,	℥viii

M. ft. sol.

Dose, teaspoonful three times a day before meals.

In this combination we have an alterative, tonic, diuretic, and aperient, which is surely calculated to repel every attack made upon any organ by this most deceptive of all diseases. All the cases I have had got along finely under this treatment. I think the medicine should be continued at least eighteen months; in fact, I always advise my patients to continue it for two years, changing the prescription from time to time so as to meet the different pathological indications as they present themselves. By the use of these remedies thus combined we keep the bowels in a soluble condition, the liver slightly stimulated; the iron keeps the blood up to the healthy standard, supplying red corpuscles, etc. Nature thus aided is, I think, capable of freeing the system from the effects of this deadly poison in the time above specified. Long years of experience will either strengthen me in this belief or scatter to the winds every vestige of faith in my imaginary "eureka."

It would not be out of place, perhaps, to say a few words here upon the treatment of venereal ulcers. After thoroughly cauterizing with hydrarg. nit. any ulcer that makes its appearance upon the genital organs, I apply either a dry or an emollient dressing. The former is usually composed of equal parts of calomel and hydrastis sulphas; the latter simple cerate with carbolic acid or ung. hydrarg. nitras.

In conclusion, I would say that I am inclined to believe that syphilis could be entirely expelled or eradicated from the human family by the adoption of certain sanitary laws and regulations. These should be more rigidly enforced in the seaport cities, where foreigners more frequently and *first* come together, as I am sure the disease is increased in virulence only by adding fresh fuel to the flame. Remove the virus two or three generations from its origin or newly acquired fountain head, and it is almost harmless. I however think a little syphilis a good thing to have around, as a moral agent, when we can confine it to certain classes. But I must refer the discussion of this part of my subject to those engaged in another field. I thank you, Mr. President and gentlemen of the Academy, for your kind attention.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

J. S. TODD, M.D., REPORTER.

ATLANTA, June 5, 1877.

The President, Dr. V. H. Taliaferro, in the chair.

The following letter was read and discussed:

(Near) TALLAHASSEE, FLA., May 20, 1877.

Dr. V. H. Talliaferro, Pres. Atlanta Academy of Medicine:

DEAR SIR: Knowing the lively interest you take in every thing pertaining to medicine, I would be glad to ask an expression of the Academy, through you, upon the subject of "Morphia as a Parturient." Our text books, rather than attribute such action to it, lay it down as one article the medical properties of which are infallibly to the contrary. This I have learned, by often chagrining experience, is not the case. More than once I have administered it with a view to stopping the parturient process, when, to my astonishment and amazement, it but increased, both in frequency and vehemence, the throes of labor, and hastened the case to a speedy termination.

I will give the history of one case, which is typical of them all. It is as follows: M. C., col., æt. about 27, has had several children. Was taken with labor pains on Friday, accompanied by almost unbearable continuous pain in lumbar region and hips. The old midwife in attendance becoming alarmed, sent for me on the following Sunday at 8 o'clock. Upon reaching the bedside, I found my patient suffering greatly from the pain in parts mentioned above, but there were no true labor pains; they had almost ceased, and the patient was much exhausted. An examination aroused suspicion of impacted head. Chloroform was administered by inhalation, and ergot internally. The pains returned, and after some hours, finding that my suspicions were justly aroused, I performed craniotomy on a dead child with a keen knife, as I had no instruments with me. The pains then ceased, and for hours repeated doses of the usual quantity of ergot were given without the slightest effect. The same use was then made of a decoction of gossypiirvadix, with like effect. The day was now well nigh spent, and as I could devise no means by which to make traction upon the fœtus or cause a return of the pains, I administered a one-third grain dose of morphia, stating at the time that I would go for my instruments, thinking that the patient would go to sleep and that all would be well until my return. I left and returned in one hour, to find that "all was over." The patient and friends stated that about twenty or thirty minutes after I left the house the pain in hips and other parts subsided, and immediately there was a return of severe, genuine labor pains, which expelled the contents of the womb in a very short time. Were this the only case, I would attribute it to a mere return of pains, but this I cannot do, knowing that in every case in which I have given the drug, *after there was considerable dilatation of the os uteri*, it met with a like result.

In searching for a predecessor in this matter, I find that for twenty years or more medical attention has been occasionally drawn to the subject, and some have used morphia in this connection with much success. None, however, have attempted to give its physiological action upon the uterus; nor do I; would merely suggest, that as chloroform allays pseudo pains without interfering with the normal contractions of the womb, may not morphia allay the one and stimulate the other? I do not claim for morphia any such action, except when the os is already much dilated.

Please submit this to the Academy for discusson, as I am anxious to know the opinions and experiences of the learned gentlemen who constitute that body, upon this subject.

Dr. Jno. M. Johnson: Opium arrests the pains of labor for awhile, and this rest to a uterus that has been constantly contracting for any length of time, causes it to gather such additional strength, by reason of the repose afforded it by this anodyne, that when labor does set in again the pains are longer, hence, more effectual. This period of respite also gives time to the os and soft parts to relax, if it does not directly cause relaxation or dilatation of the mouth; for when the longitudinal and circular fibres are not acting conjointly, he believes that opium is our remedy to produce that result, by obtunding the sensibility or contractility of the circular class, without interfering with the longitudinal set, and an opening of the os is the result. He is so firmly of the opinion that opium or its alkaloids are *not* parturient, that it has been his custom, where he saw fit to delay a labor that was progressing with too much rapidity, or there were other reasons to delay its progress, such for instance as the calling of a consulting physician, to give it, and the results obtained confirm his belief. There are circumstances, other than idiosyncrasy, under which opium acts as a purgative.

Dr. J. P. Logan: As a rule, opium arrests regular contractions, and causes the interval between them to be much lengthened; irregular pains are corrected and made regular; it delays the labor. As an evidence of its *not* being parturient, it is confessedly our very best remedy to prevent and arrest an abortion. Where the os is undilated, it will always delay, frequently arrest for the time altogether.

Dr. W. F. Westmoreland: Under certain circumstances, he is of the opinion that, irrespective of the condition of the os, opium will act as indicated by Dr. Logan.

Dr. J. G. Westmoreland agreed with Dr. Logan, and said that Dr. Johnson was correct in saying that indirectly, where the circular fibres of the os refused, by reason of irritability, to relax, that in that case opium was parturient, indirectly. After normal expulsive pains are established, he is not sure that opium will arrest them.

Dr. Grant had been so much impressed by several articles that he had read, claiming parturient properties for opium, that he had feared to give it where he wished a labor not to progress with rapidity. He detailed several cases where recently he had administered it, and the results were negative.

The President said, in tedious cases, where the pains are more pseudo than otherwise, wearing the woman out without accelerating the advance of the child; where sleep has been lost for any length of time, and these conditions setting up a state of nervousness that is distressing, he gives opium to secure rest, and generally gets it; sometimes for as long as five or six hours. If the dose is sufficiently large, the interval between even normal pains will be lengthened. Tetanic, without complete relaxation, call for the use of opium, and by it are converted into regular physiological and rythmical contractions. It undoubtedly corrects certain irregularities and conditions already mentioned by the gentlemen who have preceded him, and this being true, erroneous deductions have from time to time been drawn by various practitioners. He would consider it unfortunate for this dogma to obtain general sanction, for that would deprive the accoucheur of a valuable weapon, and probably lead to the abandonment of a remedy which, under certain circumstances, is invaluable.

Dr. W. F. Westmoreland operated to-day on a gentleman thirty-five years of age, for stone. He called the attention of members to several peculiarities. The stone exhibited was quite small—about the size of a butter bean—although symptoms of its existence had been present for eight years—he about that time having suffered from nephretic colic, the calculus not being voided from the bladder. The opening through perineum had closed so completely that the urine came off by the urethra. The size of the stone, its age, and the water not dribbling, were all unusual.

Dr. Calhoun asked if he did not suspect the existence of another stone in the bladder.

Dr. Westmoreland had explored the bladder with his finger, which on account of the thickness of its walls, causing less capacity, facilitated the thoroughness of the operation of search.

Dr. J. M. Johnson: When there is but one stone, was of opinion that it was more oval and rougher than this one, which was smooth and irregular.

Dr. Westmoreland: That depends on the composition. When they are soft or phosphatic, attrition did cause them to assume the appearance mentioned by Dr. J., but when hard or oxalic, as he thought this one was, they were often, even when not multiple, smooth and undefined in shape.

Dr. Calhoun mentioned a case of encephaloid and melanotic tumor of the orbit, which illustrated the tenacity of life occasionally met with. The first operation for its removal was done a year ago, and he thought he thoroughly removed all the diseased structure; but in six or eight weeks it reappeared, this time filling the cavity of the eye and involving the lower lid especially, and the upper slightly. The operation of removal the second time was performed with great care, and Vienna paste used afterwards. This operation was done early in December last. It reappeared in two weeks. On yesterday he learned that the man, although he had been upon the verge of the grave for three months, was still alive; the cancer now occupying the regions around the eye, the lower half of the face on that side, had extended across the bridge of the nose and to both sides of the lip; there were also evidences of its extension along the optic nerve to the brain. This extensive cancer has existed for six months. The case was originally one of simple pterygium. He believes the exciting cause of the cancer in this case was the repeated applications of nitrate of silver and nitric acid, which were applied to the pterygium to effect a cure, by an attendant.

Dr. J. G. Westmoreland: Does Dr. Calhoun mean to convey the idea that the pterygium was changed to cancer by the application of caustics?

Dr. Calhoun: Where there is a cancerous diathesis, undoubtedly; he was sure that constant unwarrantable interference, that caused continuous local irritation, would lead to its development; and while it was not the rule, he thought occasionally it did result, as in the present case—where there is no history of carcinoma in the family—from such applications.

Dr. W. F. Westmoreland was of the opinion that while cancer was generally hereditary, it was sometimes developed. He did not agree with Dr. Calhoun in this case, however; for it was local irritations, chronic, subacute in character, such as phymosis, and not acute inflammations that result from the application of escharotics or caustics, that give rise to this condition. The pterygium was more likely to have been the exciting cause; for the character of irritation it produces was an example of the local subacute inflammation that he alluded to, more than the applications.

Dr. Calhoun said that a large number of the people generally had a tendency to pterygium, which never developed into cancer.

Dr. J. G. Westmoreland: The seeds of cancer are present whenever a local trouble degenerates or assumes a cancerous condition.

Dr. W. F. Westmoreland: That proposition was still *sub-judice;* but there were in his opinion undoubtedly developed causes independent of diathesis. If the seeds were present in every case, operation would be useless in toto, and the cures that result not infrequently from surgical interference justify them.

Dr. Calhoun saw no more difficulty in believing that a cancerous diathesis could be acquired than that of tubercular, which is generally acknowledged. Some fungus growths, as for instance those frequently seen after an operation for strabismus, are aggravated, i.e., grow faster and larger by interference than when left alone.

Dr. Baird: The continual recurrence in Dr. Calhoun's case clearly pointed to a cancerous diathesis. Would like to know positively whether there ever was a case of cancer developed.

Dr. Jno. M. Johnson cited a case where a healthy man, without any history of carcinoma in his family, contracted a cancer from a cut on his upper lip while shaving. He had three plastic operations performed on him in Paris, the cancer returning after each one, and it finally killed him. He had been in the habit of shaving every day, and this was thought to be the source of irritation.

Dr. W. F. Westmoreland: That was an epithelial cancer.

Dr. Calhoun: Epithelial cancers are curable.

Dr. Westmoreland: When operated on before the glands become involved they are, but after these organs have become infiltrated with cancerous deposition from the epithelial variety, they are more malignant than any other variety; but if taken in time they will not return.

Dr. Johnson: So I am to understand that if they return the treatment was not begun soon enough?

Dr. Westmoreland: Yes; for an encephaloid or melanotic, if there be a diathesis, and the gland be not larger than a shot at the time of extirpation, will surely return; the epithelial not.

Dr. W. F. Westmoreland had under his care two cases of chorea. He desired the commiseration of the Academy, and wanted to know if any one knew of anything new in therapeutics of such cases. He had used arsenic with some advantage, but if there was a better remedy in the possession of any member he desired it.

Dr. Baird had had some experience with severe cases, and sketched an outline of his treatment, which had been highly satisfactory. When the case was very severe, the irregular contractions taking place with great violence, he would give chloroform by inhalation; keep the patient, as occasion required, under its influence for a greater or less length of time. Bromide of potassium in large doses, and chloral in conjunction, are useful. Tonics, both vegetable and mineral, and of the former he was much pleased with strychnia. He placed considerable stress upon and had much confidence in the application of ether spray to the spine, applied with an atomizer.

Dr. Jno. M. Johnson, while he approved of Dr. Baird's treatment, had used the spray to the spine, in one case, for six weeks, without benefit. He must have consumed five gallons of it in the various applications. She finally got well, and if anything other than time and nature brought about the cure, it was the valerinate of zinc and ferro-cyanate of quinine. She was under treatment for six months, and during that time he used every remedy he had ever read of, and all that he could hear suggested. As she got well on the two remedies mentioned above, he would use them in another case if opportunity presented. The cold douche to the head produced often a degree of composure which was much desired, and was to be recommended.

Dr. J. G. Westmoreland: From the physiological action of the calabar bean, he was inclined to believe, without having tried it, that it would be beneficial in cases of chorea. The cold shower bath had benefited a case of his very much.

Dr. W. F. Westmoreland asked Dr. Baird if he did not attribute much of the good effect of the ether spray to the spine to the inhalation of some portion of it.

Dr. Baird thought that its action was independent of any absorption.

Dr. Calhoun: A year and a half since, T. D. was pounding a copper cartridge, when it exploded, and a portion of the copper, very much the size and shape of the lachrymal bone, entered the front of the ball, causing a collapse of that organ, with complete blindness. The eye pained him severely, and enucleation was advised, to which however he would not consent. Since that time the eye has at intervals given much pain, rendering him unfit for work. A week since the injured eye was exquisitely painful, red, and very sensitive on pressure. The sound eye was inflamed, and vision in it failing; it was, in fact, sympathetically inflamed, and to save it the other was enucleated by Dr. J. W. Williams of this city, he performing the operation with dispatch and scientific ability, illustrating his thorough knowledge of the anatomy of the parts and his dexterity with the scalpel. The copper plate was found imbedded in the posterior portion of the globe. The customary dressings were applied, and the patient is doing finely, all sympathetic trouble having vanished.

Academy adjourned.

An Expose of "Opium Antidotes."—At the request of the President of this Society, I have the honor of presenting an expose of a reputed "opium antidote," gotten up by a certain S. B. Collins, of LaPorte, Indiana.

I have recently been in correspondence with a gentleman, not unknown to literary fame, who, induced by the demands of a painful neurotic disorder, has for years been an opium habituate. What with that desire for relief which pervades suffering humanity, that distrust of self, and hesitancy to accept regular, scientific treatment, so eminently characteristic of such unfortunates, and lured by the laudatory assertions of this individual, he allowed himself to be inveigled into his hands, and, after several months' "treatment" awoke to the fact that he was still "in the bonds," and his exchequer depleted to the extent of nearly two hundred dollars! This gentleman very kindly furnished me with a liberal supply of the so-called "antidote," which I placed in the hands of Dr. Squibb, for analyzation, to whom I return my thanks. Dr. S. being prevented from making the analysis in person, submitted it to chemists in New York, in whom he expresses confidence, who reported:

"Result of analysis of an 'Opium Antidote,' received from Dr. E. R. Squibb:

Water	28.66
Glycerine	66.89
Cryst. sulphate of morphia	4.45
	100.00

The sample is colered with magenta.

WALTZ & STILLWELL."

This proportion of morphia amounts to *twenty-five and a half grains to the ounce!* Mr. Stillwell informed me that it contained nothing else in any appreciable quantity.

Additional evidence is furnished by the analysis of another sample of this nostrum, made last autumn, by Dr. Henry Carmichael, Professor of Chemistry, in Baldwin College, and Assayer to the State of Maine, who reported:

"The 'opium antidote' contains morphine. The morphine is combined with sulphuric acid. The sulphate of morphine amounts to 3.2 per cent., or *fourteen grains to the ounce!*"

The same, precisely, applies to another compound prepared by "Mrs. J. A. Drollinger, formerly Mrs. S B. Collins. Last August a specimen of her manufacture came into the possession of Dr. George F. French, of Portland, Maine, who brought it before the Cumberland County Medical Society, which appointed a committee to investigate. They reported:

"The committee to whom was assigned the duty of investigating the so-called 'Opium Antidote' prepared by Mrs. J. A. Drollinger, of LaPorte, Indinna, beg leave to report that a sample bottle of the article, which was obtained directly from the manufacturer, was sent to Dr. E. R. Squibb, of Brooklyn, New York, for quantative analysis. His onerous engagements rendered it impossible for him to conduct the experiment in person, but he sent the specimen to Messrs. Walz & Stillwell, Chemists, New York, a firm which he thoroughly confides in and indorses. So deeply interested did he become in the project, that he insisted upon bearing the expense of the analysis, in spite of the committee's expressed unwillingness to have him assume such a tax. Walz & Stillwell report that 'this sample is glycerine colored with aniline, and containing in solution crystallized sulphate of morphia, 1.383 per cent., by weight'—about *seven grains to the ounce!*

Frederick Henry Gerrish,
George F. French,
Thomas A. Foster,
Committee."

Further corroborative testimony is to be found in an interesting paper by Prof. Stanford B. Chaille, in the New Orleans *Medical Journal*, May, 1876, regarding a gentleman who, beguiled by another of this fraternity—J. C. Beck, of Cincinnoti—had, for nearly, a year, been taking his nostrum, without relief, and was at last rescued by Dr. Chaille, who, with judicious treatment, restored him to health in a comparatively short time. A sample of this submitted to Mr. J. Johnson, Chemist of New Orleans Charity Hospital, revealed *ten grains of opium to the ounce.*

Collins claims to be the pioneer in this business. Since his advent several others have come to the surface. Indiana has the van, furnishing no less than six—Collins, Drollinger, L. Meeker, Bowser, Squire; Ohio, two—Beck, Wilford; Illinois, two—Carlton, Phelon; Michigan, one—Marsh. Recently one has appeared in New York, and another in New Jersey.

I possess all their circulars, with a single exception. Their pretentions are preposterous, their falsehoods glaring.

Collins says "it is not a substitute for opium. That opium does not and cannot antidote itself, is a sufficient reply to your second query."

Drollinger avers "it does not contain opium in any of its numerous forms." Beck asserts "it has no opium in it." The *absolute falsity* of such statements, in view of the analyses presented, is too patent to call for comment.

Regarding the modus operandi, the article is supplied in pint bottles, each supply intended to last a month. The manner of taking is a small teaspoonful four times daily—8 and 11 A.M., 3 and 8 P.M. None is furnished without a cash payment in advance, and after that at prices ranging from five to thirty dollars per month, according to the amount of opium previously consumed, and—the facility with which they succeed in fleecing their victim.

Such is the history of these nostrums and their venders. The wide-spread importance of the topic is obvious, and it is to be hoped this information may be given a large publicity, that, through the profession and others, opium habituates may be "warned against these widely advertised nostrums, which, while promising a safe and sure cure, only serve to increase the appetite for opium, until it finally becomes unconquerable." —*Ohio Med. Record.*

A CASE OF VESICO-URETHRO-VAGINAL FISTULA, THE RESULT OF VENEREAL ULCERATION.—*By A. L. Galabin, M.A., M.D.*—The patient, Elizabeth F., twenty-six years of age, single, a domestic servant, came first among my out-patients in October, 1876. She complained of incontinence of urine, and stated that it had come on gradually about six months previously, being felt at first only while she was walking or standing, continence remaining perfect in the recumbent position. Lately, however, incontinence had been complete. No history of any kind could be elicited to account for it. The vulva and surrounding parts were much inflamed and excoriated, the nymphæ irregular, and the hymen not present. On examination by speculum, the os uteri was found to be abraded. The urine was alkaline, and contained phosphatic deposits. Being in doubt whether the local inflammation could be the result simply of the irritation set up by the urine, or was due to some venereal affection, I sent the patient for the opinion of one of my surgical colleagues. He reported that he found no positive proof of any venereal causation, and considered that the inflammation might be the result of the incontinence of urine, which was possibly connected with the presence of a sensitive vascular caruncle, which existed at the orific of the urethra.

The patient was accordingly admitted into the obstetric ward on November 8th, 1876; the urethral caruncle was destroyed by means of the benzoline cautery, and strong nitric acid was applied to the abraded cervix. A few days later the existence of syphilis became manifest. The excoriations around the vulva and anus acquired the distinct character of mucous tubercles; the throat was sore, and a superficial ulceration was discovered on the left tonsil; several spots of scaly syphilitic rash also appeared about the face. The patient was then subjected to mercurial treatment until December 6th, when it had to be discontinued for a time on account of salivation. The mucous tubercles were dusted with calomel powder, and to the excoriations a solution of nitrate of silver, of the strength of ten grains to the ounce, was applied, with the effect of much improving their condition. The incontinence of urine continuing, a further examination was made on January 22d. It was then discovered that not only had the urethral caruncle disappeared, but the urethra had become completely occluded near its orifice from the effect of the cautery. It was thus evident that a fistula must exist, and a careful digital exploration of the vagina was therefore made, which had hitherto not been done, on account of the presence of syphilis. It was found that at three quarters of an inch from its orifice, the urethra was drawn upwards and firmly adherent to the posterior surface of the pubes. At this point a diagonal fissure existed, which at first appeared to involve the urethra only. A bent probe was passed through the fistula, and the occluded portion of the urethra divided upon its point by the knife. A catheter was afterwards passed daily, in order to prevent the occlusion again taking place. The patient now confessed, what she had previously concealed, that she had been delivered of a child nearly three years before. This could not, however, be connected with the production of the fistula, the incontinence of urine being only of about six months' duration.

On February 12th, seven days after the end of a menstrual period, it was decided to undertake the operation for cure of the fistula, although the general condition of the patient was by no means fully satisfactory, the manifestations of syphilis not having altogether disappeared, and the urine being still alkaline, with a phosphatic deposit. She had proved incapable of bearing any continuous administration of mercury, but iodide of potassium, in ten-grain doses three times a day, had been given for a week prior to the operation, and was continued afterwards. After trial of the left semi-prone position with Sims' speculum, it was found that this did not bring the fistula so well into view as Simon's exaggerated lithotomy position *(Steiss-ruckenlage)* with the buttocks raised high, and the thighs strongly flexed. The latter was accordingly chosen for the operation. A trial was made of drawing down the cervix externally, as recommended by Simon, but although this could be done without much force, the effect was that the fistula still remained drawn up behind the pubes, and was overlapped by a fold of mucous membrane. The plan was therefore adopted of fixing a double tenaculum forceps near the posterior angle of the fistula, and by this means drawing it slightly downwards. No speculum was used, but the perineum was held back by a large two-pronged surgical retractor, such as are used in amputations. The incisions were made entirely by the knife, and since only half the length of the urethra remained in front of the fistula, and there was, therefore, fear that continence might not be restored, even though the fistula were closed, care was taken to remove the least possible amount of tissue in vivifying the anterior margin, a result which was much facilitated by Simon's position. The fissure previously felt proved to be the entrance of a funnel-shaped opening expanding upwards, lined by cicatricial tissue, and involving all the neck of the bladder. When, therefore, all the cicatricial tissue had been removed, the finger passed freely into the bladder. After somewhat free hemorrhage had been checked by iced water, the margins were united over a gum elastic catheter by five silver sutures, which were simply twisted, the line of union being diagonal. The catheter was tied in and connected by an india-rubber tube with a vessel beneath the bed. It was left in place for three days, the bladder being washed out daily, but after that the patient was allowed to pass her urine at pleasure.

There were some signs of bladder irritation for the first few days, and on the 16th, four days after the operation, rather serious symptoms of peritonitis commenced, the pulse rising to 124, and the temperature to 103°.4, while the abdomen was tympanitic and tongue dry. On the 21st the pain and tenderness were subsiding, and on the 22d a menstrual period came on about a week before the expected time, after which she gradually improved. The sutures were removed on the 26th, fourteen days after the operation, having been left somewhat longer on account of the peritonitis. No urine had escaped in the meantime, and the fistula was found perfectly closed. A few drops of urine escaped in the standing position for a few days after the patient first got up, but when she left the hospital on March 14th, continence was perfect.

The foregoing case may be of interest from the fact that the union was not hindered either from the constitutional syphilis, which was still giving evidence of its presence in the shape of mucous tubercles around the labia, from the alkaline condition of the urine, or from the severe febrile condition which followed the operation. The mode of origin of the fistula could not be exactly ascertained. It appeared, however, that it could not have been due to the delivery nearly three years before, although some cicatricial tissue might have been left which afterwards became the seat of the ulceration. But whether the lesion was due to a venereal but non-syphilitic sore, to the chancre which communicated the syphilis, or to tertiary syphilitic ulceration, remained uncertain. The last alternative, however, would seem to be almost excluded by the character of the symptoms, which was that of the earlier constitutional manifestations of the disease.

As to the method of performing the operation, I am disposed to think that, in cases of urethro-vaginal fistula, in which union is more difficult to secure, on account of the thinness of the septum from which the margins have to be cut, and in which it is desirable to attain the utmost possible economy of tissue, in order to secure complete continence after closure of the fistula, the position of Simon has often the advantage over that of Sims'. As a testimony to the improvement which has taken place in English obstetrics of late years with regard to an earlier interference in protracted labor, I may add that all the cases of vesico-vaginal fistula admitted into the obstetric ward of Guy's Hospital within the last three years have been cases either of old fistulæ, of from six to ten years' standing, most of which had been previously operated on without complete success, or of fistulæ the result either of venereal ulceration, of attempted operation for atresia vaginæ, or of the impaction of a calculus in the urethra. Not one had been the consequence of recent delivery.—*Obs. Jour.*

THE editor of the *St. Louis Clinical Record*, speaks from personal observation of the Arkansas Hot Springs as follows: "We believe them greatly over-rated. That the treatment of syphilis, gout, and rheumatism, in their chronic forms, is remarkably successful at these springs, is a fact too well attested to admit of dispute. But that the waters in themselves possess any remarkable virtues seems to us altogether another matter. Enormous doses of mercury and iodide of potassium are given with a fearlessness—we might say recklessness—that is somewhat astonishing to one who has given no attention to the other treatment enjoined. Immense quantities of water at a high temperature are drunk, and with this frequent hot baths are given. These powerful alteratives are thus hurried through the system and rapidly eliminated. The process of repair and change of structure are thus greatly hastened. If the kidneys and skin are in fair working order, and the stomach does not get irritated, the improvement is, of necessity, rapid.

"Four, five, six, seven, and even eight hundred grains of the iodide have been given in the twenty-four hours, so we are informed. The stomach must first be guarded by demulcent drinks, of course.

"The bin-iodide and corrosive chloride of mercury, inunctions with the oleate of mercury, and calomel vapor baths, are freely employed. We saw no case—heard of no case of the cure of syphilis by the baths and drinking of the waters alone. A few cases—one or two—of cure of chronic rheumatism by the waters alone, without medicine, were reported to have occurred.

"The claim set up and defended so vigorously by interested parties and by deluded patients, of the marvelous, even supernatural virtues of these springs in the cure of chronic diseases, is absurd in the extreme, when all the facts are considered.

"If a physician is able to secure a perfect following out of his rules by his patient; can prevail upon him to drink the proper amount of hot pure water, and take as many hot water and vapor baths at home, and will have the courage to give as much mercury and iodide of potassium at home, he can cure him as rapidly and effectually at home as at the Hot Springs.

"There is one thing that the honorable, conscientious physician cannot do, however; he cannot impose upon the credulity of his patient, and gain the aid of those powerful co-operative agents, wonder and expectation, which the Hot Springs "resident physician" can do. These are auxiliaries too often despised, too often employed by the quack, to the benefit of the patient and the discomfort of the honorable practitioner.

"We give some of our Hot Springs confreres credit for being themselves the dupes of their own credulity in the matter of faith in the wonderful virtues of the waters. We cannot believe that they are all dishonest. At the same time we cannot believe that their faith is well founded. The weakness of their trust is fully demonstrated by the reliance they place upon the most potent agencies known to science, and their unwillingness to trust *any case* to the healing influence of the waters alone."—*Ohio Medical Recorder.*

FRACTURE OF THE PATELLA—A NEW AND SIMPLE DEVICE FOR DRESSING.—*By M. E. Poynter, M.D.*—A great many modes have been adopted, and instruments invented, for the cure of this rather rare and very intractable accident. None of these have given entire satisfaction. Many are very complicated and costly, whilst others inflict great suffering upon the patient. Unsatisfactory results almost always follow the treatment, and ligamentous union is about all the surgeon expects, with separation of the fragments varying from a fourth of an inch to three inches.

Simplicity of construction, with easy adaptation to the ends sought, together with effective results, are desiderata in all surgical dressings. The nearer a surgeon can come to making and fitting his dressings for fractures at the bedside, so as to meet the requirements of any given case, the more nearly will he approximate the end desired, viz., the cure of his patient. This often requires considerable mechanical skill, and that a surgeon should possess.

By reference to the current text-books, it will be seen that the complicated apparatus recommended by Druit, and the inquisitorial hooks of Malgaigne, have been abandoned by the later authors, and a reliance is placed upon variously disposed bandages and adhesive strips, with a long, straight back splint and elevated foot piece—all requiring confinement to bed from six weeks to three months. The ring approached more nearly to perfection, but it has some disadvantages—as difficulty in fitting accurately, the cutting off of circulation, and trouble to keep in place. The instrument herewith presented obviates many or all these difficulties, and is so easy of construction that any surgeon can make it with his pocket knife in a few minutes, and adapt it properly at the bedside of his patient. The only materials wanted are an ordinary cigar-box, or a couple of shingles, and a straight piece of board 1½ or 2 feet long. It will be understood, of course, that this is intended exclusively for transverse fractures, and the great object to be attained is approximation of the fragments and retaining them in position until union can occur.

Procure the bottom and top pieces of the cigar-box, and split two pieces two inches wide, and hollow out one end of each to a semi-circle (only a little shallower). Trim the board back of this somewhat into the shape of the handle of a paddle; take a few nails from the cigar-box, and fasten close to the hollow end of each of these pieces a block of wood an inch long and half an inch square. Groove out the block a little on the end, away from the semi-circle, for the purpose of retaining a piece of cord in the way of a pulley. You will next procure a straight board to reach from the middle of the thigh to the middle of the calf, a roller and some lint or old muslin, and a piece of stout cord, and you will have all you will need.

First apply a thickness or two of lint or muslin to the under surface of each of your short splints, and apply one above and the other below the fractured patella, permitting the semilunar end to grasp its part of the bone accurately; line the long splint, and apply on back of limb; let an assistant hold them so, whilst you apply a roller from the toes to the middle of the thigh, observing as you do so that the short splints are in line on top of the limb. You will then be ready to bring the fragments together, which you will have no trouble whatever in doing, by taking a couple of turns of a stout cord around the little blocks, and drawing gently but firmly on them. Tie the cord, and you are done. You will perceive that the bones are held firmly in apposition and cannot readily be displaced. If you have a compound fracture, or much bruising of the soft parts, your dressing has left the whole surface open for treatment, and the straight splint allows no pressure upon the popliteal vessels, at the same time giving you extension and a firm basis for fixing the short splints. Put your patient on his feet with a crutch, and send him out of doors; he need not be kept confined an hour.

I have used this dressing several times, just as given above, and with the happiest results. If this bone can have ossific union, I think I have attained it, as I have been unable to detect either separation or ligament. In fact, this simple affair has been more satisfactory in results than any fracture dressing of any kind I have ever seen.—*Clinic.*

A CASE OF PROGRESSIVE BULBAR PARALYSIS.—*By S. W. Seldner, M.D.*—C. R., aged 23, barber, was admitted into the Hebrew Hospital on the 12th of February, but did not come under my direct care until the first day of March, at which time I assumed charge of the institution. The following history was obtained from him: Patient has never had any bodily infirmities that confined him to his bed, prior to the present attack; has never had any rheumatic or gouty affections; nor has he had any venereal disease, save a gonorrhœa which readily yielded to treatment.

About fourteen months ago he had an attack of angina tonsillaris, for which he was treated. The first symptoms which attracted his attention to his present complaint, occurred about one year ago, at which time he was subject to severe pain in the head, occurring paroxysmally, and principally localized in the occipital region, and extending from there down the spinal column to the junction formed by the cervical and dorsal vertebræ.

There was also more or less vertigo, and in addition to this the patient noticed after the lapse of a few weeks a peculiar weakness in articulating; certain letters and syllables were difficult to pronunciate, and when pronounced were not always intelligible to those to whom his remarks were addressed; in fact, the condition known as "alalie" was what we had in the particular case.

It was not long before symptoms of dysphagia developed themselves, and deglutition was so much interfered with that at times the food, especially the fluid portions, would cause him to eject a portion, or it would produce suffocative symptoms of an alarming character. This was more particularly present a day prior to his death. With all this difficulty there was a remarkably good appetite, and the patient never thought of returning any of the food that had been sent him, even if it did not tickle his palate.

His sense of taste was not wholly interfered with. If quinine was placed upon his tongue, it required an interval of about five minutes to ascertain its presence through its bitter taste; there was a continual dribbling of saliva, and during sleep this symptom annoyed him very much.

The most distressing symptom (to him) was the gradually developing weakness in his upper extremities, and more particularly the right, which was very much wasted, so much so that when he apposed the thumb to the index finger, the prominence formed by the ball of the thumb was entirely wanting; the deltoids, biceps, triceps, and pectoral muscles were atrophied so that but a few fibres remained where once these muscles existed.

Tactile sensibility and electro-muscular excitability were much diminished; in fact, his upper extremities were completely anæsthetic.

A pin or needle introduced to the depth of five or six lines was not perceived, and unless he saw his hands held he was not aware that any one was holding them. Under these circumstances it is evident that the patient was so helpless that he could not use his upper extremities, even for the purpose of supplying himself with food; and in this condition he was compelled to rely on the commiseration of his faithful nurse for sustenance.

There were no symptoms referable to the organs of vision or hearing, nor was there any circulatory disturbance.

His digestion was good and his bowels were regular. His respiratory organs, which from the physical examination failed to reveal a diseased condition, caused him considerable suffering; he would suddenly have attacks, which, to use his own words, seemed to him as "if he could never breath again," and these would occur diurnally and nocturnally.

An examination of his urine for albumen and sugar gave a negative result.

In this way he continued to grow (physically) gradually less, until the 29th day of March, when he suddenly expired, after previously having partaken of a hearty meal and some brandy which a fellow-sufferer had contributed.

The parents of the young man would under no consideration consent to a post-mortem examination; therefore we are compelled to rely on the ante-mortem investigation as to the correctness of our diagnosis. (Prof. Arnold, who saw the patient in consultation, agreed with me in the diagnosis.) There is no disease with which it might be confounded, yet the similarity of some of the symptoms to those produced by other lesions should make us careful in order to trace the trouble to its proper seat.

The tottering gait might cause one to confound it with progressive locomotor ataxy; yet the patient could retain the erect posture with his eyes firmly closed, and the lancinating pains through the knees, so characteristic of this malady, were altogether wanting.

From sclerosis it is distinguished through the absence of nystagmus and tremors during intended movements. In fact, when the medullæ spinalis is affected, as was the case with our patient (judging from the atrophy of the muscles), there is always, or generally, a condition of myelitis tending to sclerosis.

In a given case it is difficult to say which is the original affection, and some writers content themselves by giving that priority which first manifested itself; thus if the gradual wasting of the muscles was the first appreciable symptom the patient observed, independent of the gradually developing difficulty in swallowing, they call it progressive muscular atrophy, and vice versa. Practically speaking, it makes little difference, for the two diseases are so intimately associated, or rather blended, that their recognition as being one or the other is a matter of small importance.

Even their pathological conditions are so nearly analogous that it is difficult at times to draw these fine distinctions, and if we believe with some of the most recent writers on this particular subject, we can content ourselves that if progressive bulbar paralysis is accompanied with the symptoms of progressive muscular atrophy, we may rest assured that pathological changes have taken place of an atrophic degenerative character in the medullæ oblongata and medullæ spinalis.

The disease being always of central origin.

In reference to treatment (so far as our literature is concerned), it leaves much to be wished for, and from the tendency of the malady but little can be done.

The preparations of silver, gold, strychnia, phosphorus, and zinc have each had their admirers; bromide of potassium has been tried and abandoned; electricity has been extensively used, and although it does not prevent the fatal issue, yet for a time during its use the symptoms either remain stationary, or temporary improvement takes place.

When the case has advanced so far that the patient is unable to swallow, it becomes necessary for us to sustain life through the introduction of food by means of the œsophageal tube.—*Maryland Med. Jour.*

A CASE OF GLANDERS IN THE HUMAN SUBJECT.—*By Dr. Wm. Jones.*—The recent death of a man from glanders or farcy (identical infections) ought to impress the people with the necessity of giving a wide berth to horses infected with that disease; and the inefficiency of all therapeutical means suggests the expediency of efficacious prophylactic measures for the compulsory destruction of the infected animals. The occult and insiduous nature of the disease, especially the chronic variety, and the difficulty of diagnosis in the incipient and early stages of its progress, attach peculiar importance and value to every pathognomonic symptom.

I was called on the fifteenth instant to see Martin Egan, aged 36 years, residing on Fifteenth street, occupation in a flour mill, subject to slight bronchial affection from inhalation of dust, but always healthy until the middle of last February, when he was taken ill with fever and rheumatism. For this he was treated until he was seized with diphtheria as we supposed, a few days before the fifteenth, previous to which no suspicion of the nature of the malady had occurred to any one, his wife and children holding uninterrupted intercourse—the latter frequently playing with and kissing him until his throat got sore.

I was informed that he had severe pains in the joints and muscles, and that lumps or bunches were noticed in the middle of the extensor muscles of the thighs and arms, but that they had disappeared; that the pains had ceased; that he was considered convalescent, being able to sit up and walk round a little. His appearance denoted extreme cachexia; his muscles were exhausted and flaccid, and the slightest attempt at voluntary motion threw them into uncontrollable agitation and tremor. There was constant subsultus tendinum. No symptoms of abscesses anywhere. Erysipelatious inflammation extended over the bridge of the nose to the malar bones, with infiltration and swelling, especially on the right side. The nares were completely filled with a foul, crusty deposit, the partial removal of which was followed by discharge of a yellowish, curdy, tuberculous matter. The lips were covered with dry blisters and the gums with a deposit of a sooty color; the tongue with a thick, dry, brown fur. The mucous membrane of the mouth and fauces was dry and parched; in some parts corroded, in others, especially on the roof of mouth and isthmus of the fauces, covered with a ragged, grayish colored coating. But the most remarkable of all was the appearance of the soft palate, which was in a dry, gangrenous condition, as if the actual cautery had just been applied, the surrounding parts being of livid red. There was neither sanious discharge, secretions, or appearance of sloughing. Deglutition was but slightly impeded. Slight bronchial rales were heard over the lungs, which were sound with that exception. The temperature was normal, his respirations 25 per minute, his pulse feeble and 130. There was decided somnolency, though his mental faculties were unimpaired. The sub-maxillary glands about the size of peas, hard as bone and painful on pressure. There was slight enlargement, but evident induration of the glands of the lymphatic system everywhere; no eruptions on the body, but in various places over the shoulders, chest and extremities, I distinctly felt round nodules about the size of small buttons, apparently rooted in the subcutaneous cellular tissue. The skin covering them became afterwards livid and putrescent.

On the 19th his pulse was not discernible. The cartilaginous portion of the nose was completely gangrened. He lapsed into a comatose condition in which he lingered for three days, until death released him on the 22d. The foregoing symptoms convinced me at first that it was not a case of diphtheria or ordinary pyemia, and enquiry as to the possibility of other infections disclosed the fact that he had doctored his horses for glanders or farcy during the winter months, and a short time before he was taken sick in February.—*Pacific Medical and Surgical Journal.*

RECENT PROGRESS IN SURGERY.— *Excision of Joints.*—Dr. Culbertson has collected his cases by means of circulars addressed to physicians in the United States and reference to various surgical treatises and medical journals. The work is chiefly statistical in its character.

Excision of the Hip-Joint.—One hundred and twenty-one cases of excision for gunshot injury have been collected. Of one hundred and nineteen of these, of which the result is known, thirteen recovered. The results given show that this excision cannot be strongly advocated with a view of obtaining useful limbs, but simply as a surgical resource to save life.

Four hundred and seventy-two cases of excision for disease are given. Of these two hundred and forty-one cases of partial excision. In regard to the extent of bone removed, we learn that the greatest mortality was shown in cases in which the head of the femur alone was excised, next the head and neck, next head, neck, and trochanter. The most favorable results were obtained when the head and part of the trochanter were removed. There are one hundred and seventy-seven cases of complete excision for disease. We find here that the mortality is greater in complete than in partial excisions; that it increases as the amount of pelvic bone is removed. "One might say that the mortality-center is at the head of the femur, the rate diminishing as the bone is removed outwards along the femur, but increasing as it advances inwards upon the pelvis." Ninety cases of this series recovered. Forty-five per cent. of these obtained "perfect limbs."

Excision of the Knee-Joint.—Mr. Filkin, of Northwich, England, was the first to execute a complete excision of this joint for disease, 1762. The author has collected about seven hundred cases. In comparing hospital with private practice we find that 25 per cent. died in private practice and 87.5 per cent. in hospital practice, when the operation was done for gunshot injury. When done for disease the mortality in private practice was 30.76 per cent. and in hospital practice 25 per cent. Males endure this operation better than females, according to these statistics. For gunshot wounds the most favorable period of life for the operation is from fifteen to twenty years. In disease the most favorable is from five to fifteen years. The form of incision made no essential difference in the mortality. In gunshot injuries 58.82 per cent. gained useful limbs, and in 23.52 per cent. the limbs were worthless. In excision for disease, four hundred and twenty cases recovering and eleven dying, 14.38 per cent. had "perfect" and 42.45 per cent. useful limbs.

Excision of the Ankle-Joint.—Two hundred and eighty-five cases for disease, injury, or deformity are reported, and forty-five for gunshot injury. The mortality is greater in gunshot wounds than in injuries; there is no mortality among the cases of excision for disease and deformity in the "traumatic," non-traumatic, malignant, or syphilitic cases. The author says that "it is evident a large proportion of these excisions result in more or less usefulness of the members."

Excision of the Shoulder-Joint.—About a thousand cases are included under this head. A little over 2 per cent. gained perfect limbs in gunshot injuries, and 22 per cent. had useful members. In 1.03 per cent. the extremities were worthless. In the class of injuries 18 per cent. secured perfect results. In diseases perfect results were obtained 9.47 per cent., and 70.52 per cent. were useful, 4.15 per cent. were worthless. A few cases of subperiosteal excision are given, and we find in one case where 4.71 inches of the bone was removed there was but 1.17 of an inch shortening. In a second case where 3.93 inches of bone was excised, there was .75 of an inch shortening only. It is to be regretted that the question of subperiosteal resection is not considered in a special table for all the joints, but we presume the number of these cases were too few to admit of a fair comparison.

Excision of the Elbow-Joint.—The most favorable age for excision of this joint for disease was found to be from ten to twenty years. But about five per cent. of the patients died of this operation. A large per cent. gained useful limbs. The results as to usefulness are more satisfactory in the partial than in the complete excision.

Excision of the Wrist-Joint.—The single longitudinal incision gave the most favorable results, and the double lateral incision and Lister's modification of the same gained useful members next in order. In disease perfect results were obtained in 7.50 per cent. of the cases, 45.57 per cent. gained useful limbs, and in 24.02 per cent. the members were worthless.

The operation known as Lister's is described in detail, and it will be remembered that in a former report this operation was mentioned as highly praised by Dr. Otis.

In a report of the sixth congress of the Society of German Surgeons is a discussion on resection of joints, brought out by a paper from Professor Huter. His general conclusion as regards resection of the foot was that partial resection must be generally practiced in military surgery, but that great caution was necessary in employing it in caries. In regard to the elbow-joint he sums up as follows: (1.) In cases of injury, partial resection is almost always to be performed. (2.) In caries great caution is necessary in undertaking resection, and a decision as to its results in respect to function has yet to be arrived at. Professor Gurlt believed that anchylosis was more frequent in partial resection of this joint. Langenbeck thought that in cases of injury one could not be too conservative; on the other hand, in disease it was very important to remove every portion of diseased bone. A discussion arose as to the propriety of excising or leaving the trochanter in resection of the hip-joint. Mr. Volkmann preferred removing the trochanter, there being liability of anchylosis if the head alone was excised. Dr. Lucke, of Strasburg, made the removal of the trochanter major dependent only on the adequate escape of the secretions of the wound. In young individuals he only partially removed it. Dr. Langenbeck disapproved of the principle of removing the trochanter. Most of the resections were performed on children, and the growth of the bone was interfered with by dividing it below the trochanter. He was not much in favor of long drainage tubes, but they were often necessary in this operation, and he had even introduced them through the acetabulum into the pelvis. Dr. Volkmann also used long drainage tubes. He was of the opinion that the simple removal of the head of the femur had as much influence on the growth of the bone as the division below the trochanter; the femur grew from the lower end. In his cases growth was not arrested,, and a useful new joint was more easily obtained by his method, as the sawn surface of the femur, after the excision of the trochanter, came into contact with the acetabulum as if it were a new head of the bone.

In the Boston City Hospital Report, just published, is an interesting account, by Dr. D. W. Cheever, of a dissection of a newly formed elbow-joint seven years after a subperiosteal excision performed by him. The patient was a boy fourteen years of age at the time of the operation. From the sawn ends of the shafts of the bone had developed: "(1.) A new head of the radius. (2.) A new coronoid process firmly attached, a new (rudimentary) olecranon partially attached to the ulna. (3.) A long, powerful hook of bone representing the external condyle of the humerus, and firmly attached to the shaft. (4.) A large, partially detached and irregular bone representing the internal condyle and trochlea. (5.) The articular end of the humerus, trochlea, and lesser head, imperfectly repaired, but in process of bony growth." All the bone sections in the operation were made in the shafts above the line of the epiphyses. The arm was a very useful one. Two photographs give an excellent idea of the extent of reproduction of bone.

"New" Operation for Opening the Nasal Cavity.—Mr. Harrison Cripps devised the method for removing the sequestra

of bone from the nose of a syphilitic female aged thirty. The fœtid discharge had ulcerated the skin of the lip and made her an object of aversion. The operation is thus described: "The right corner of the upper lip was seized by the operator and the left by his assistant; by this means the lip was everted and drawn upwards, while the soft parts were separated by a clean sweep of the scalpel, cutting upwards with its edge kept close to the bone. This incision extended from the second bicuspid tooth on the right side to that on the left. By drawing upon the upper lip, the nose, together with the soft parts forming the anterior portion of the face, could be easily raised in such a manner as thoroughly to expose the nasal fossæ. . . . After the removal of the bone, the forefinger could be passed quite back to the posterior wall of the pharynx. . . . There was scarcely any bleeding during the operation." This operation has been described by Rouge, who has performed several; also by Mr. Warrington Howard, Messrs. Pollock and Holmes.

Rapid Cure of Popliteal Aneurism by Esmarch's Bandage.—Dr. Thomas Smith, F. R. C. S., reports the case. The patient was a man aged forty-five. The swelling was about the size of a hen's egg, and was of three weeks' duration. "It came of itself." It was increasing pretty rapidly. Pressure on the femoral controlled the pulsations readily, but flexions of the limb did not affect them. There was severe pain at night. After a few days' rest in bed, on March 17th, at three P.M., "the limb was rolled in a flannel bandage from the toes to the lower part of the popliteal space, and again from above the aneurism to the groin. Esmarch's india-rubber bandage was then applied, with only moderate firmness, from the toes to the aneurism, the patient being in bed; he was then made to stand up until the sac was well filled with blood, when the elastic bandage was applied from above the aneurism to the groin, where the limb was surrounded with the thick india-rubber tubing, so as completely to arrest the circulation in the limb. The aneurism and popliteal space were thus left exposed, so that the least pulsation in the sac could be detected. In this way the circulation was stopped for one hour, during the last half of which chloroform was used on account of pain. At the end of the hour, while the patient was still under chloroform, Esmarch's bandage was removed, and the Italian tourniquet was applied to the femoral and maintained in position for two hours." It was finally removed to relieve pain, and the aneurism was found to be reduced in size, and solid. He was discharged April 6th, cured.

A number of cases are reported in this article, most of which were successful; a brief summary of them is given. The indications are to arrest the circulation in the limb, and, at the same time, keep the sac filled with blood. Each operator has used slight modifications of the above. In a previous report we have already quoted some of these cases. We presume that aneurisms of any considerable size would hardly be amenable to this treatment. We should expect more frequently in the latter case a satisfactory result from compression by the Massachusetts General Hospital tourniquet.—*Boston Medical and Surgical Journal.*

CASEOUS DEGENERATION.—*By Geo. E. Walton, M.D., Cincinnati, O.*—An exceedingly necessary condition of the consideation of this subject is a knowledge of what is meant by the term "caseous degeneration." As far as my investigations of the subject go, it is this: A disease of cells in which the protroplasm of the cell is transformed into fat; a deposit therein of saline substances takes place, and the fluids of the cell are in great part removed. As a consequence of this deposition this form of degeneration can occur in any part of the body where there are cells; but some tissues are especially subject to it—thus the digestive, respiratory and genito-urinary mucous membranes, the pulmonary alveola, also serous surfaces and within the texture of certain organs. The circumstances with which the occurrence of caseous degeneration is associated, are chronic inflammations—inflammations of a so-called low grade.

It is exceedingly questionable whether pus ever takes on caseous degeneration. Says Billroth: "When these yellow spots are found in the cadaver, it is often supposed that they correspond to a dried collection of pus; but this is not true, or at least very rarely so. Most of the cheesy collections were from the first in miniature what they now are in gross, and were never fluid pus. Those who maintain the conversion of pus into caseous matter state that it occurs when the pus is pent up or confined for a long time within deep structures. It is well, however, to bear in mind that the mere fact that the pus is so confined is an evidence of chronic inflammation—an indication of that condition of the system in which the products of imflammation are prone to resolve themselves into caseous matter instead of pus; and it is not impossible to conceive that cells, on the one hand, may undergo caseous degeneration, and, on the other, conversion into pus—the two processes marching into line, without the deduction that the one has been transmuted into the other.

Since caseous degeneration is distinguished by the conversion of the protoplasm of the cell into fat, we ask what is the difference between caseous degeneration and fatty degeneration? It seems to be this—that when a cell becomes affected with fatty degeneration, the protoplasm and entire contents thereof become converted into oil; in the place of the cell we have an oil globule. In the fatty degeneration of muscular fiber, says Rindfleisch, "in the vast majority of cases these cells undergo a complementary infiltration with oil; they are converted into fat-cells." In caseous degeneration, on the contrary, it is not a conversion of the contents of the cell into oil, but a transformation in which fatty matter occurs associated with various salts.

What is the cause of caseous degeneration? Why is it that in the one case a cell is transformed into a fat-cell—in the other into a caseous mass? A definite answer to this question is involved in the mystery of molecular action far beyond the eye of the microscope. The disease may be in the nucleus. For the present we can only in this matter do as the ancients did in so many—theorize; and a theory is not a bad thing if we do not forget that it is only a theory.

It seems to me that the cause of caseous degeneration has its origin in the scrofulus diathesis, or perhaps more properly, as the French sometimes term it, in lymphatisme. That caseous degeneration is always associated with inflammation of a chronic type is established. That scrofulous inflammations are almost invariably of a chronic kind is also decided. The association, then, of caseous degeneration as a result of the scrofulous diathesis is quite natural. What is the scrofulous or lymphatic diathesis? Says Billroth, this diathesis "exists chiefly in childhood. Persons with this diathesis, especially children, are greatly disposed to chronic inflammatory swellings of the lymphatic glands, even after inconsiderable irritations; to certain inflammations of the skin (eczema impetigo,) especially of the face and head; to catarrhal inflammations of the mucous membranes, especially of the conjunctiva, more rarely of the intestinal canal and respiratory organs; to chronic inflammations of the periosteum and of the synovial membrane of the joints. . . . The termination of the inflammation in caseous degeneration is not rare; it is particularly frequent in the lymphatic glands. Of course, it must have a very bad effect in the general nutrition where the mesenteric glands are degenerated in this way, and the chyle ducts thus mostly obstructed. Incurable atrophy of the entire body may thus be induced. The lymphatic diathesis is in most cases congenital, and is transmitted from generation to generation. But it may also be developed by improper modes of life. Among the most injurious causes are chief or exclusive diet of potatoes, flour, or sour bread, unhealthy, damp dwellings, lack of cleanliness, fresh air," etc.

From this picture, drawn by an accomplished hand, we perceive that in all morbific changes associated with the scrofulous diathesis, the lymphatic system and glands are especially involved. May it not then be that the entire series of results have for their primary origin an illy developed lymphatic system—a condition in which these vessels and glands are unusually delicate in structure as compared with other parts of the body, or as compared with others whose tissues are in every way normal. The analogies which may be drawn from other diseased or faulty conditions of the body certainly favors such a supposition. Cases of malformation or arrest of development of certain portions of the body are sufficiently frequent. Persons in whom the entire venous system is lacking in tone, who are disposed to varicose under slightly exciting causes, are met with; persons whose digestive system throughout its entire course is exceedingly irritable and easily deranged are frequently seen; and as to those who suffer from an exceedingly sensitive and easily deranged nervous organism, they need only be mentioned in this day.

Especially are we led to consider the plausibility of this view when we reflect on the fact that one of the special functions of the lymphatic glands and follicle is that of originating lymphatic corpuscles. If these glands and follicles are illy developed or perform their office in an imperfect manner, and, according to Billroth, are excessively irritable, how are we to expect healthy lymph, healthy blood, or healthy nutrition?

It is hardly necessary to refer to the fact that we have caseous degeneration arising in the course of other diseases—such as syphilis, glanders, typhoid fever, epithelial and fibroplastic tumors, etc. It does not follow that in these instances a conjoined lymphatism, hereditary or acquired, is not the predisposing cause of the caseous degeneration.

This view of the subject I know is not new, for Broussais long ago held that the local lesions of scrofula were due to irritation and inflammation of white tissues (tissues blancs) developed under the influence of lymphatic predisposition. It is not unusual, however, in medical science, that a proposition shall be posited and gain adherents in one generation, be rejected by the succeeding generation, and taken up and adopted by the third. We should not reject things only because they are old, or adopt them because they are new.

The close relation between caseous degeneration and lymphatism may further be inferred from the many experiments made in animals for the purpose of developing miliary tubercle by the inoculation of various substances. By these experiments it has been detirmined that certain animals are much more subject to caseous degeneration than others—especially is it so with the rabbit and guinea-pig. Now these animals seem to possess a more highly developed lymphatic system than others. Sections of the diaphragm of the rabbit are specially the beautiful network of lymphatic capillaries and serous canals, which are there so perfectly developed. Says Klein: "According to Ludwig and Schewigger-Seidel, we may distingush in the tendinous center of the diaphragm of the rabbit a system of wide lymphatics that lie perallel to one another, between the fibers of the radiating layer, and are lined by endothelium. . . . The plexus of the capillary lymphathics attains its greatest development at the posterior part of the centrum tendineum. In addition to these statements made by Ludwig and Schweigger-Seidel, it may be observed that in the rabbit, man, and cat, but especially in the guinea-pig, a rich system of serous canals and lymphatic lacunæ lined with endothelium can be demonstrated in the matrix itself, both on the abdominal and thoracic surface." While the excessive or peculiar development of the lymphatic system in certain animals, as thus indicated, does not prove a difference in texture, still it points in that direction; and when the field of comparative histology of the lymphatics shall be thoroughly explored, we will undoubtedly find that radical differences in quality do exist—differences which will account for the easy production of tubercle in one animal and its difficult production in another.

From this question, which is capable of indefinite expansion, I pass somewhat abruptly to the consideration of the relationship between caseous degeneration and tuberculosis.

Prof. Longworth, at the last meeting, gave a clear and graphic resume of the present state of knowledge on this subject, to which it would be impossible for me to add anything. He then showed that tuberculosis especially affect the lymphatics, but that as far as our knowledge goes there is nothing specific in tubercle—that not only will the insertion of tubercle beneath the epidermis of certain animals result in a general tuberculosis, which may be manifested in any part of the organism permeated by lymphatics, but that other substances of vegetable origin will produce the same result, provided always that at the site where the foreign substance is introduced, a primary focus of caseous degeneration occurs. We also learned that this result is obtained most frequently in certain animals, such as the rabbit and guinea-pig; whilst in others, such as the sheep, nothing of the kind follows either the introduction of tubercle, caseous matter, or foreign substances.

Now, the intimate relation which exists between caseous degeneration and lymphatism on the one hand, and on the other, between caseous degeneration and tuberculosis, leads me to believe that tuberculosis is nothing more than a peculiar manifestation of lymphatism or scrofulism. In other words, those persons or animals whose lymphatic vessels, glands, and follicles are of a peculiar delicate texture, be it hereditary or acquired, are just those in whom under favorable conditions and exciting causes tuberculosis will occur. In this I know I am asserting nothing new, for Lugol long ago maintained that tubercle is only a manifestation of scrofulous diathesis. And the distinguished Rokitansky expresses his opinion in these words: "For our own part we hold *tubercle* and *scrofula* to be *identical*—tuberculosis and scrofulosis to be one and the same disease.

A more recent writer, C. J. B. Williams, expresses himself in this way: "It is the scrofulous inflammation of lymphatic glands that makes them enlarge first, and then harden, and at length degenerate into caseous masses (instead of undergoing resolution or complete suppuration in healthy abscess,) which soften eventually and discharge from scrofulous sores. It is a similar type of inflammation which may develop miliary induration in the adenoid tissues of the lungs, tending in like manner to caseation, softening, and spreading, and to the formation of vomicæ."

The entire tendency of modern research, whether it be histological, pathologic, etiolcgic, or therapeutic, is to establish this fact.

Turn to the causes of lymphatism or scrofulism, and we find prominent among them a vagetable diet, damp dwellings, lack of fresh air, want of cleanliness, etc. Turn to tuberculosis, and we find the same predisposing causes enumerated. Look at the therapeutics of the disease, and we find cod-liver oil the remedy in either, par excellence.

It may be said, however, that the fact that a disease is disseminated by the lymphatics is no evidence that the cause of the disease is due to a morbid condition of those vessels. Truly, this is so. The lymphatics are absorbants, and thus syphilis enters and permeates every portion of the system; the lymphatic glands are enlarged and indurated—an evidence that the syphilitic virus is passing through them. Soon, however, this passes away, and these glands are to all appearances as before. We do not have a fire lighted up as in lymphatism or tuberculosis, which smolders and burns in the lymphatics themselves.

In conclusion, I may summarize by the following statements:

1. Caseous degeneration is a disease of cells in which for the protoplasm fat and salts are substituted.

2. Caseous degeneration differs entirely from fatty degeneration.

3. Caseous degeneration is an evidence of lymphatism or scrofulism in the individual or animal.

4. Tuberculosis is secondary to caseous degeneration.

5. Tuberculosis is only a manifestation of lymphatism or scrofulism.—*The Clinic.*

Editorial.

AMERICAN MEDICAL COLLEGE ASSOCIATION.

In our last issue we had only sufficient space to give the general proceedings at the recent meeting of this Association. The Constitution, By-Laws, and Articles of Confederation, adopted at the permanent organization in Chicago, will be found below. It will be observed that no very decided innovation was made on the established usages of colleges.

The unqualified condemnation of two graduating courses a year by the same Faculty, only expresses the sentiments previously entertained by a very large majority of medical colleges in this country.

Most institutions had already increased the time for a course of lectures nearly to that adopted by the Association. Seventeen weeks, the minimum time understood universally to govern medical colleges, has been extended to nineteen by some, and even to twenty-one by some others. So that twenty weeks required by the "Articles of Confederation," amount to no very decided change in this particular.

The knotty question of fees has been passed over in a manner not to come directly in conflict with any. "Established fees" are alluded to without any expression as to the amount. The difficulty heretofore mentioned in this JOURNAL has been avoided. Entire uniformity in amount being impracticable just now, for reasons we have already given, the Association wisely ignored the question.

Cash payment of fees, and the limited number of beneficiaries, outside of those required by the charter of certain colleges, will not, we imagine, be particularly objectionable to the faculties of the various medical colleges throughout the land.

CONSTITUTION.

ARTICLE I.—*Name.*—The name of this Association shall be the "American Medical College Association."

ARTICLE II.—*Objects.*—The objects of this Association shall be the advancement of medical education in the United States, and the establishment of a common policy among medical colleges in the more important matters of college management.

ARTICLE III.—*Officers.*—The officers shall be a president, a vice-president, and a secretary and treasurer, who shall severally perform the usual duties of such officers. They shall be elected by ballot at each session of the Association, and shall serve from the time of adjournment of such session till the adjournment of the next ensuing session; but present officers shall be perpetually eligible to re-election.

ARTICLE IV.—*Membership.*—Section 1. Any regular chartered medical school in the United States which shall conform and subscribe to the Articles of Confederation of this Association may become a member of the same.

Sec. 2. Any college member which shall be convicted, upon trial, of any willful violation of any of the Articles of Confederation of the Association, or which shall fail to make answer to such charges of such violation, duly preferred, at the meeting at which the same come up for trial, shall thereby forfeit its membership in the Association.

Sec. 3. Any college which shall thus have forfeited its membership, or any college whose original application for membership shall have been rejected by the Association, shall not be eligible for membership again until a period of two years shall have elapsed since the time of forfeiture or rejection.

ARTICLE V.—*Meetings.*—Meetings of the Association shall be held not oftener than annually, at some time in the months of May or June. The exact time and place shall be fixed by the President with regard to the object for which the meeting is to be held; but when, in his judgment, there is no special reason to the contrary, preference shall be given to the place of meeting of the American Medical Associan, and to a time conveniently near to the time of meeting of the same.

ARTICLE VI.—*Representation and Voting.*—At the meeting of the Association each college may be represented by one or more delegates, or may submit, in writing, resolutions, amendments to the Constitution or By-laws, or its vote upon pending questions, except upon charges against a college for violating the Articles of Confederation. In all cases each college shall have but a single vote; and when representation is by two or more delegates, the vote shall be cast by the senior delegate in the faculty rank. The president shall not be deprived by his office of his privileges as delegate in voting. Upon questions connected with the trial of charges against a college, the accusing and accused college shall have no vote.

ARTICLE VII.—*Amendments.*—Amendments to the Constitution may be proposed at the meetings of the Association or by letter to the Secretary. In order to be entertained, they must be seconded, at the time of proposal, by one other college or its delegate. When proposed at a meeting, or submitted to the Secretary after call for a meeting has been issued, they must lie over a year before a vote is taken. Upon voting, two-thirds of the votes cast shall be necessary for adoption.

BY-LAWS.

ARTICLE I.—*Calls for Meetings.*—The calls for meetings shall be issued by the Secretary, after conference with the President as to time and place, and must not be later than two months before the proposed time of meeting. The secretary shall call meetings upon:

1. Direction of the president, who is empowered to convene the Association at his pleasure.

2. Resolution of adjournment at previous meeting.

3. Receipt, before March 1, of proposed amendments to the Constitution, By-laws, or Articles of Confederation, duly recommended by two colleges, or of a written request for a meeting for any purpose, when proffered by not less than three colleges.

4. Receipt, before January 1, of charges and specifications against a college for violation of the Articles of Confederation.

In all cases, where a call for a meeting is issued, the object of the same must be stated in the call, with proposed amendments, resolutions, or charges given in full.

ARTICLE II.—*Order of Business at Meetings.*—The order of business at meetings shall be as follows:

1. Presentation of credentials of delegates.
2. Reading of minutes of last meeting.
3. Voting upon pending questions.
4. Reading of annual reports of members.
5. Introduction of new business.
6. Election of officers for the ensuing term.
7. Treasury report of the Secretary.
8. Adjournment.

ARTICLE III.—*Admission to Membership.*—Section 1. Colleges which shall, through their delegates, subscribe to the Constitution, By-laws, and Articles of Confederation, at the meeting of the Provisional Association of Medical Colleges, at which the same shall have been adopted, and shall file with the Secretary a copy of their college charter, shall thereby become members of the Association.

Sec. 2. After adjournment of the aforesaid meeting, colleges wishing to join the Association must apply to the Secretary, and forward a copy of their college charter. The Secretary shall thereupon send notice of such application to all the colleges of the Association. If, after four months, no objection shall have been received, the Secretary shall then send to the applicant a copy of the Constitution, By-laws, and Articles of Confederation, and, on return of the same, duly subscribed by an authorized officer of the college, shall enter the name of said college upon the roll of members of the Association. Objection to the application on the ground of non-conformity to the Articles of Confederation may be made by any college member; but the same must be submitted in writing to the Secretary, and within four months after receipt of the notice of application. Such objection must be in the form of definite charges and specifications. Upon the receipt of a written objection, the Secretary shall immediately forward the same to the applying college; and, where the objection shall have been received before January 1, shall call a meeting of the Association, for the ensuing season, to consider the same. At this meeting, the applying college shall be allowed to send a member of its faculty, to conduct its case before the Association. The consideration of the objections shall then be conducted in the manner prescribed in Article IV, for the trial of charges against a member, and a two-thirds vote shall be necessary for the admission of the applicant.

Sec. 3. Any college which shall have been disqualified for membership for two years, as provided in Article IV, Section 3, of the Constitution, and which shall, at the expiration of that period, desire to join the Association, must make application again in the regular form.

Article IV.—*Charges Against Members.*—Section 1. Charges against a college member for violation of any of the Articles of Confederation, shall be entertained only when preferred by a college member of the Association, and occompanied by definite specifications. Such charges and specifications must be submitted in writing, to the Secretary, on or before January 1. Upon receipt the Secretary shall immediately transmit the same to the accused college, and, unless the charges be, in the meantime, withdrawn, shall convene the Association for the ensuing season for trial of the accusation.

Sec. 2. At the trial of the charges against a member, the accusing college must be represented by delegate; but the accused may, at its option, submit a written defence only, without representation by delegate. The case for the prosecution shall first be submitted, and then that for the defence. No counsel shall be allowed, but the witnesses on either side may be cross-examined by any delegate present. The Association shall decide, by majority vote, upon the admissibility of evidence, or of questions to witnesses. Upon closure of the case, a vote shall be taken thereon, before the final adjournment of the session, and a two-thirds vote shall be necessary for conviction.

Sec. 3. In case of failure by an accused college to make answer to the charge at the meeting of the Association duly convened for trial of the same, the meeting may, by majority vote, drop the accused college from the roll of members; and such dropping shall be equivalent to forfeiture of membership for conviction of violation of the Articles of Confederation.

Sec. 4. No member shall be tried twice upon the same specifications.

Article V.—*Delegates.*—Section 1. Delegates to the meetings of the Association must be chosen from among the executive officers of a college, or from the members of the faculty having a vote on the passage of candidates for graduation.

Sec. 2. In case objection is made to any delegate upon grounds of personal unfitness, the case shall be argued before the meeting, and by a two-thirds vote the delegate may be excluded. But, in such case, the retiring delegate shall be entitled to file with the Secretary such communications or votes upon pending questions (except upòn charges against a member or applicant) as he may have been instructed by his college to present to the meeting.

Article VI.—*Affiliated Colleges.*—Section 1. The list of American affiliated colleges to be recognized by the Association shall include only the following: 1. Members of the Association; 2. Colleges not members, which are not ineligible for membership, and which conform to the following of the Articles of Confederation: Article I, sections 1 and 3 of Article II, Article III, Article V.

Sec. 2. The Secretary shall send a copy of this Article and of the Articles of Confederation to all American medical colleges not members of the Association, with a request to know if they desire to be placed upon the affiliated list, and if they conform to the requirements demanded. Upon receipt of an affirmative answer, accompanied by a copy of the college charter, he shall notify all members of the Association of the fact, and the admission of the college to the affiliated list shall then be proceeded with in the same manner as provided in Article III, for admission to membership.

Sec. 3. Charges against an affiliated college shall be proceeded with in the same manner as provided in Article IV, for proceedings in case of charges against a member.

Sec. 4. Upon conviction of non-conformity with the necessary requirements for a place upon the list of affiliated colleges, the convicted college shall be dropped from the same, and shall not be eligible for re-establishment till a period of two years shall have elapsed.

Article VII.—*Reports.*—Section 1. Every college member and every affiliated college shall forward, yearly, to the secretary of the Association as many copies as there are colleges in the Association, of every catalogue, circular, announcement, prospectus, form of advertisement, or other publication issued by the college during the year, and shall also make a full and true report embracing the following points: 1st. Honorary degree conferred within the year, with the name and age of the recipient, and the reasons why the degree was given; 2d. The names of all persons who have been allowed remissions or reductions of established fees, with the reasons, in each case, for the proceeding. If no honorary degrees have been conferred or reductions or remissions of fees made, the fact shall be reported.

Sec. 2. At each meeting of the Association the printed documents specified in section 1 shall be distributed among the delegates present, and the special reports as to honorary degrees and reductions and remissions of fees shall be read to the Association by the Secretary.

Sec. 3. The documents and reports called for in section 1 must be forwarded to the Secretary within four weeks after the annual commencement of the college. In case of failure to do so on the part of any college, the Secretary shall notify the delinquent af its failure, and if the reports be not received within four weeks after issuing such notice, the delinquent college shall be suspended in its membership of the Association, and in its privileges as an affiliated college, until the required reports be made. In such case, the Secretary shall notify both the delinquent and all the colleges of the Association of the suspension, and, upon the receipt of the reports, of the reinstatement of the delinquent college.

Article VIII. *Assessments.*—Section 1. To meet expenses, the Secretary may assess the colleges of the Association in a sum not to exceed $10 a year.

Sec. 2. He shall account for his receipts and expenditures at each meeting of the Association.

Sec. 3. Any college which shall be two years in arrears shall be notified of the fact by the Secretary, and if the dues be not paid within three months thereafter the delinquent college shall be suspended in its right of representation in the Association until payment be made.

Article IX.—*Amendments.*—Medical colleges belonging to this Association shall publish the Articles of Confederation in their annual catalogues for at least three consecutive years after joining the Association.

ARTICLE X.—Amendments to these By-laws shall be proposed and adopted in the manner prescribed for amendments to the Constitution.

ARTICLES OF CONFEDERATION.

(To be subscribed and conformed to by all the Colleges of the Association.)

ARTICLE I.—*Of the Faculty.*—The medical members of the faculty must be *regular* graduates or licentiates and practitioners of medicine, in good standing, using the word "regular" in the sense commonly understood in the medical profession.

ARTICLE II.—*Of Tuition.*—SEC. 1. The scheme of tuition shall provide for a yearly systematic course of instruction covering the general topics of Anatomy, including dissections, Physiology, Chemistry, Materia Medica and Therapeutics, Obstetrics, Surgery, Pathology, and Practice of Medicine. The collegiate session, wherein this course is given, shall be understood as the "regular" session.

SEC. 2. Said regular session shall not be less than twenty weeks in duration. This section to go in force at and after the session of 1879–80.

SEC. 3. Not more than one regular session, counting the regular session as one of the two courses of instruction required for graduation, shall be held in the same year.

ARTICLE III.—*Requirements for Graduation.*—No person, whether a graduate in medicine or not, shall be given a diploma of "Doctor of Medicine" who shall not have fulfilled the following requirements, *except* as hereinafter provided for in Article IV:

1. He must produce satisfactory evidence of good moral character, and of having attained the age of twenty-one years.

2. He must file a satisfactory certificate of having studied medicine for at least three years under a *regular* graduate, or licentiate and practitioner of medicine, in good standing, using the word "regular" in the sense commonly understood in the medical profession. No candidate shall be eligible for final examination for graduation unless his term of three years' study shall have been completed, or shall expire at a date not later than three months after the close of the final examina-

tion. This section to take effect at and after the session of 1879–80.

3. He must file the proper official evidence that, during the above-mentioned three years, he has matriculated at some affiliated college, or colleges, for two regular sessions, and in the course of the same (except as provided in 4,) has attened two full courses of instruction on the seven topics mentioned in Article II. But the *latter*, at least, of the two full courses must have been attended at the college issuing the diploma. No two consecutive courses of instruction shall be held as satisfying the above requirements unless the time between the beginning of the first course and the end of the second is greater than fifteen months.

4. In case a college shall adopt a systematic graduated scheme of tuition, attendance on the whole of the same shall be equivalent to the requirements mentioned in 3, *provided* such scheme includes instruction in the seven topics mentioned in Article II, and requires attendance at least at two yearly regular collegiate sessions of not less than twenty weeks' duration each.

5. The candidate must have passed a personal examination before the faculty on all seven of the branches of medicine mentioned in Article II.

6. He must have paid in full all college dues, including the graduation fee.

ARTICLE IV.—*Of Honorary Degrees.*—An honorary degree of "Doctor in Medicine" may be granted, in numbers not exceeding one yearly, to distinguished physicians or scientific men of over forty years of age. But in such case the diploma shall bear across the face the words "Honorary" in conspicuous characters, and the same word shall always be appended to the name of the recipient in all lists of graduates.

ARTICLE V.—*Of Fees.*—SEC. 1. All fees shall be paid in lawful money, and no promissory notes or promises to pay shall be accepted in lieu of cash for payment of fees.

SEC. 2. No ticket or other certificate of attendance upon college exercises shall be issued to any student until the dues for the same shall have been fully paid.

SEC. 3. The established fees for the exercises of the regular session—except the matriculation fee, graduation fee, fee for dissections—may be reduced not more than one half to graduates of other affiliated colleges of less than three years' standing, and to undergraduates of the same who have already attended two full courses of instruction of the regular session.

Sec. 4. The same fees may be remitted altogether to a college's own alumni, to graduates of other affiliated colleges of three year's standing (the three years dating from the time of graduation, and ending at the close of the regular session for which the tickets are given,) to undergraduates who have already attended two full courses of the instruction in the regular session, the latter of which at least shall have been in the college making the remission, and to theological students, when not candidates for a diploma.

Sec. 5. The same fees may be reduced or remitted to deserving, indigent students, to a number not exceeding *five* per cent. of the number of matriculates at the previous regular session of the college.

Sec. 6. Under no circumstances whatever other than the above shall the faculties, or any members of the same, grant *upon their own authority* any remissions or reductions of established fees. And it is distinctly understood and agreed that the faculties will discountenance and oppose the authorizing by governing boards of the admission of individual students on other than the regularly established charges for their grade.

Sec. 7. Remission or reduction of fees for other exercises than those of the regular session, return to a student of any moneys after payment of fees, or an appropriation of funds of the college for payment of any student's fees, or part thereof, shall be deemed violation of provisions of this article in regard to remission or reduction of fees.

Article VI.—*Of Recognition of other Colleges.*—No college shall admit to the privileges accorded in Articles III and V the students or graduates of any college which, during any period of the student's or graduate's pupilage, shall have been excluded from the list of affiliated colleges recognized by the Association.

Article VII.—*Amendments.*—Amendments to these articles shall be proposed and adopted in the manner prescribed for amendments to the Constitution.

CONVENTION OF AMERICAN MEDICAL EDITORS.

The Association of American Medical Editors met in the reading-room of the Palmer House, on the evening of June 4th. H. C. Wood, M.D., of Philadelphia, occupied the chair, and Dr. F. H. Davis, of Chicago, acted as secretary.

The President, in his annual address, threw out the following points for discussion: 1. The number of medical periodicals in this country is too large; a reduction in number would afford a few really good journals a decent support; 2. Societies should be induced to discontinue the printing of their transactions in extra volumes which reach but a very limited number of readers; those transactions should be carefully condensed and then published in some medical journal which the society could afford to send to every member for less than the cost of the annual publication of the transactions. Under this arrangement the members of the society and the journal would be benefitted; the former by receiving a medical journal gratis, and the latter by swelling its subscription list. 3. It is time that the medical colleges improve their method of teaching and elevate the standard of preliminary education. 4. Some means of protecting the people and the profession against quackery is urgently needed; perhaps the best plan would be to have a State Board of Examiners to examine candidates in these branches which are common to all schools, being supplemented by boards of therapeutists of the several schools to examine in those subjects on which the schools differ.

After a brief discussion upon the President's address the election of officers for the ensuing year was in order.

Dr. John P. Gray, of Utica, was elected President, and Dr. L. Connor, of Detroit, Vice-President. Dr. F. H. Davis, Secretary, held over.

The Association then adjourned until next year.—*Journal and Examiner.*

EDITORIAL CORRESPONDENCE.

LOUISVILLE, GA., July 5, 1877.

Editors Atlanta Medical and Surgical Journal:

Deeming it the duty of physicians to report all cases of importance, as well as being afforded pleasure "to add one cubic inch to the stature," I take this opportunity of reporting to your generous pages the operation for and treatment of a case of strangulated femoral hernia. In so doing, I would offer but this apology—that though this form is rare in the male, circumstances of a peculiar nature rendered the full and complete recording of all the points impossible. Should the manner in which this is written betray the fact that I am not a Solomon in the science, I would tell you that I am an unassuming country Doctor from the *wire-grass and whortleberry* portion of Georgia, content with minor operations in surgery—such as cutting off of dog's tails in this season, that they may not in the persuit of the rabbit knock off the whortleberrys. But to the case. Mr. A. J. Hudson, aged 66, weight about 160 pounds, known to be temperate and in good health, was suddenly attacked on January 20th, with violent symptoms (resembling those in colic) after having drank freely of cold water when very warm. Found in his room by Mrs. Hudson, while thus under the false impression that he was only suffering from an attack of colic, every persuasion was instituted by Mrs. H. to have the family physician summoned. Before sending for the physician, however, recourse was had to remedies whose medical efficacy seemed most adequate to the demand in the case. Camphor given internally, with opium by the mouth, and enemas substantially constituted the treatment by Mrs. H., who was of course very uneasy. These remedies by smoothing over the trouble, and allaying the nervous excitement produced only temporary relief. The enema emptied the bowels below the stricture. On the morning of the 21st, vomiting set regularly in, with other symptoms which led to the discovery of an enlargement in the right groin. Becoming alarmed, Mrs. Hudson again expressed a desire that the Doctor be called in. Dr. Pilcher, my friend and colleague, living six miles distant was sent for. After arriving and making a thorough examination, he diagnosed the case, femoral hernia. Knowing the impropriety, as well as the injury of attempting to give relief by the administration of medicine, an operation was advised as the only means of relief. Having many cases on hand, just at this time that demanded his attention—with the failure to get assistants when desired, the time for operation could not be agreed upon till the 25th, much to the injury and suffering of the patient, as well as to the displeasure of the attending physician. During this interval incessant vomiting, (which was very offensive) considerable fever, high bounding pulse and hiccough were among the unfavorable symptoms. From the time of the injury to the operation, which was five days, no nourishment was taken, no action upon the bowels, (save that from below the stricture) was had. On the morning of the 25th, Dr. Pilcher and myself held a consultation and decided in the face of every unfavorable symptom to give the patient the chance of recovery. Taxis had been resorted to, but reduction by this means failed. Before attempting reduction by taxis the abdominal viscera was relaxed by flexing and adducting the thigh—thus opening up the saphenous canal. Now for the operation. Drs. Thompson, Stewart and Oliphant being present, assisted in the performance of the operation. A table of the proper length was procured and brought forward, the patient placed upon it and thoroughly anæsthetized by chloroform and sul. ether in proportion of one part of the former and two of the latter. The bladder having been looked after and the parts that were the seat of operation shaved—the attending physician, Dr. Pilcher, commenced in good earnest, by cutting down in the direction of the sac—gently exploring in front of the knife with his finger and probe—attempting to detect the pulsations or presence of blood vessels in the vicinity of the sac. The incision was made from an inch above to an inch below the sac. This was not done according to Erichsen, by pinching up a fold of skin—introducing the knife through its base with the back of the instrument turned towards the hernia, and then cutting upwards, but the incision was made down upon the parts through the fascia till coming close upon the sac. As tissue after tissue was arrived at the hook was used to pinch up the parts—the groove inserted—and the tissues cut down upon and laid aside. When coming down to the sac a halt was made to examine thoroughly if the gut had been reached, but after examination by all present, the incision was made through the sac and the gut carefully exposed. We did not, as is usually the case, find a layer of fluid between the sac and gut. This somewhat nonplused us, and we thought things were not progressing favorably. The intestine protruded fully two inches, and upon percussion showed it contained fecal matter. The intestine was very dark and had the appearance of a mortified part. The sac having been carefully examined as before said, a portion of it was seized between the finger and thumb—an opening was made with the back of the knife to the gut. The gut having been thoroughly exposed, and notwithstanding its dark appearances was thought best to reduce it and trust to nature for a restoration of its vitality. The stricture was removed by making an incision at the junction of Ginbernat's or third attachment of Poupart's ligament. The intestine was placed in its normal position, the wound thoroughly cleansed of blood, and stitches taken externally. There was no difficulty attending the administration of the anæsthetic, nor was it followed by any unusual sickness of stomach; slight depression followed its administration. The vomiting with regurgitation from the bowels seemed greatly augmented by the shock given to the nerves of the bowels by the operation. Indeed the depression consequent upon this extreme nausea was alarming, and our patient, who had undergone a most beautiful operation, seemed moribund. After almost contiual vomiting for thirty hours after the operation, the patient exhausted and relaxed dozed into a semi-sleep condition. The bowels at this period from relaxation—as well as from irritability caused by the retention of old excrement—commenced and continued to act—notwithstanding the administration of opium, tannin, bismuth, etc. On the morning of the 28th, large doses of bismuth, sub. nit., opium, tannin and chalk were commenced and given till noon, when the bowels were checked. Brandy in sweet milk and sugar was given whenever the case demanded it. The most nutritious articles of diet were used. The tongue becoming dry, the urine scanty, turpentine emulsion was administered; quinine in tonic doses was used.

July 1st.—Patient brighter than at any time since the operation, bowels acted once in the last twenty-four hours, slight congestion of lungs from lying upon the back, clear of fever. The wound doing well.

Monday, July 2d.—Patient still improving in strength and appetite, bowels moved once in twenty-four hours, actions consistent pulse regular, no fever, some cough.

Tuesday, July 3d.—Treatment—quinine in grain doses to act as a tonic, equal parts paregoric and squills, honey and ipecac, as an expectorant to relieve slight cough. Patient sitting up and perfectly clear of fever, wound healing rapidly—patient discharged.

In conclusion, I would say that the points of interest to us in this case, are, the unusual occurrence of this form of hernia in the male, and the recovery after so long standing strangulation without the loss of any portion of the bowel.

Wm. Lewis Dinkins, M.D.

BIBLIOGRAPHICAL.

Micro-Photographs in Histology, Normal and Pathological. By Carl Seiler, M.D., in conjunction with J. Gibbons Hunt, M.D., and Joseph G. Richardson, M.D. Philadelphia, 1877.

This is the ninth number of the first volume of this very estimable publication. We find in it, first, a magnified photograph of a section of lung tissue; and, considering the difficulty of accurately defining, in a photograph, a distinct representation of this tissue, we think the work has been creditably performed. Three other plates are embraced in this issue: a section of tubercular lung, transverse section of a bronchial tubule, and air-tubes of silk worm. All the specimens from which these plates are taken are gotten up in the most approved style, and may be accepted as accurate representations.

McDowell Medical Society.—Sixth annual session, 1877. Address by the President, E. H. Luckett, M.D., of Owensboro, Ky. Read at Madisonville, Ky., May 9, 1877.

Calculi Found in the Bladder after the Cure of Vesico-Vaginal Fistula.— By Henry F. Campbell, M.D., Augusta, Ga. Reprint from Vol. 1, Gynæcological Transactions. 1876.

Pneumatic Self-Replacement of the Gravid and Non-Gravid Uterus.—By Henry F. Campbell; Augusta, Ga. Reprint from Vol. I, Gynæcological Transactions, 1876.

History of a Case of Recurring Sarcomatous Tumor of the Orbit in a Child.—Extirpated the third time, and ultimately causing death of the patient. By Thomas Hay, M.D., Philadelphia. Illustrated. 1877.

EXCERPTA.

Billroth has gone to Kischenew, Roumania, the base of Russian military operations. His mission is supposed to be connected with the general hospital service of the Czar's immense army.

Sebaceous Tumors.—Says the *Medical and Surgical Reporter*, Dr. B. Hamilton injects sebaceous tumors with the strong tincture of iodine, after evacuating the contents by a small puncture. No unpleasant effects result, and no scar remains from the puncture.

Dr. Tefft, of Topeka, Kansas, writes that he has never failed to cure a case of croup, in thirty-five years practice, with simple ice or ice water. He goes on to say that the membrane cannot form without heat, and when it is formed if the parts are kept absolutely cool it will fall off and be discharged.

A new method of treating hemorrhoidal tumors is brought to the notice of the profession through *The Journal of Materia Medica*; i.e. by carbolic acid, with the addition of olive oil in the following proportions: carbolic acid ʒij., olive oil ʒi., 4 or 5 drops, to be injected into the tumor with a hypodermic syringe. The operation is said to be almost completely painless, the tumor at the point of insertion turning white. The inflammation is slight, suppurative action being established in a few days. When one tumor is treated at a time the patient can with ease follow his usual avocations. Fissures also heal rapidly when treated once or twice a week with the same solution.

To Make Leeches Bite Promptly.—Place the leeches in a glass half full of cold water. Cleanse the part to which they are to be applied carefully with warm water, and then apply the glass containing the leeches to the part. They attach themselves with surprising rapidity. The patients often speak of the bites appearing to be simultaneous. When the animals have all become attached, allow the water to escape into a sponge or cloth, so as not to wet the patient.—*Gazz. Med. Ital. Lomb.*

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Original Communications.

NASAL CATARRH.

BY J. C. LEHARDY, M.D., SAVANNAH, GA.

There are certain diseases which, like most exotic plants, may be imported where they were before unknown, and like them also, provided they find a suitable soil and climate, will thrive and be reproduced for an indifinite length of time. Whether the seed, the cell, the plant or "what not," producing these diseases be brought through the channels of commerce, or transported by "ill winds," it is here needless to discuss, as in either case it would be impossible to prevent the *importation.* Our aim is to combat the disease and destroy the germ. These reflections were suggested by the appearance in our town, some ten years ago, of a troublesome affection of the mucous membrne of the naso-pharyngeal passages, or which is more commonly called catarrh of the nose. As a great number of cases originated, then, in the commercial part of the city, and as at the same date, guano was carried constantly through the streets and along the wharves, the *causa latens* was placed to the credit of this article, and the city authorities ordered the hauling and storing of guano to be restricted to certain limits. The disease, however, continued to spread, affecting persons of all ages and stations "without regard to color or previous condition."

The mode of invasion is very insidious and often gives so little annoyance as to be overlooked for a long time. In some instances there is a mucous secretion which is believed to be produced by a "cold," in others a burning and itching sensation replaces the discharge of mucous and is at times annoying, inducing the picking at the nose with the finger nail.

Scabs now begin to form, and their presence in the nose becomes a constant source of annoyance as they require to be blown out in the handkerchief. These scabs at first transperent, become yellowish, and finally of a greenish gray or black color, when they emit a nauseous odor. However, the person affected rarely perceives this odor himself, on account of a partial loss of the sense of smell, resulting from the spreading inflammation of the schneiderian membranes. The first intimation received by the sufferer is generally from some member of the family or a friend who discovers a peculiarly nauseous, almost cadaveric smell issuing from the nose or from the mouth, whilst speaking; now, for the first time a physician is consulted and the astonished patient learns that his disease is of months, perhaps of years standing.

The physical appearance of the disease, which is best discovered in the sun-light either direct or reflected, is as follows: The mucous membrane covering the nasal passages as far as it can be seen presents a deep red color, the result of a chronic inflammation, and in many cases it is so much thickened as to resemble polypoid growths, almost closing the entire passage. If the throat be now examined by direct light on depressing the tongue, the upper portion of the pharynx will be found inflamed, thickened and generally covered with a muco-purulent secretion. In using the reflecting mirrors this inflammation will be seen to extend upwards, involving the openings of eustachian tubes and the posterior nares. In the more advanced cases, on the floor and septum will be seen a dark scab, which, being taken hold of by broad-bladed forceps, can be removed entire; its forcible removal is however usually followed by bleeding from portions of the surface to which it was attached. This scab varies in size and thickness, is tenacious, and of a grayish green color, emitting a very disagreeable smell.

The miscroscopic examination of this scab, as might be expected from its position and slow mode of formation, will bring before the astonished eye of the looker on such a multifarious array of objects as would set the mind of an aspiring student wild in the field of *discovery*. The animal, vegetable and mineral creation are all represented here—from the dust of age to king cotton; bright crystals, rich woolen tissues—the cryptogams, the algæ, as well as the môre complex vegetable tissues have their place in the panorama passing before the eye as the slide is slowly moved. However, after repeated examinations, it will become apparent that they are foreign substances, caught in the nasal secretions in the act of breathing.

In every scab of a well marked case of naso-pharyngeal catarrh there may always be found a very large amount of mucus cells, also exudation cells, puss cells and granules, large and small epithelial scales and occasionally blood cells and fibrine filaments; intermixed with these, in almost every specimen examined, will be found a greenish coloring substance which appears amorphous, and floats freely among the granules, or seems incorporated with the epithelial scales. Then again, in the more liquid preparations, there are sometimes perceptible small rounded cells, either single, in cluster, or in lines, floating rapidly on the surface—these I believe to be the very "*bacteriæ*," or a very closely allied species of the *renowned disease generator*.

I have not, however, so far as my researches have gone, been able to trace the cause of this disease to the presence of that remarkable ferment, for the reason that in the examinations made of the fresh mucous secretions collected in site in the various stages of the disease, I have failed to find them except in three instances, and in these, they were very few in number, single cells, and floating. In the green amorphous substance so constantly found in this complaint, there may be found a cause for this disease—with my means of examination I cannot point to it with certainty, as it presents no organization.

The Pathology.—It sometimes occurs that, while examining a patient for some other ailment, a recently developed case of this nasal catarrh comes to the physician's notice. In such a case, a small portion only of the mucous membrane lining the septum in one or both nostrils may be found inflamed and of a bright red color, it is usually covered with a perfectly limpid secretion, which, on being wiped away, discovers, on examination with a lens of three to five diameters, small points of erosion dotted over its surface.

In examing the same patient a few months later, the inflammation is seen to have extended along the septum toward the bones, on the floor of the lower meatus, and on the mucous membrane covering the upper and lower external cartilages of the alæ. So far, the sense of smell is not in the least impaired. Months after this, on again examining the same individual, the whole of the mucous membrane covering the turbinated bones, and lining the different cells connected with the nose, may be found involved in the disease. The color of the affected parts, at first bright, has turned to a deeper red; the erosion has extended over a large surface; the sense of smell has diminished in proportion to the extent of inflammation involving the mucous membrane covering the nasal fossæ and septum, and where the olfactory nerve is distributed. An examination of the pharynx at this stage indicates that the disease has spread over its whole upper surface, the mucous membrane is thickened, eroded and covered with a muco-purulent discharge.

Scabs are formed as the disease progresses; first on the septum, then on the floor of the lower chamber, then higher up on the turbinated bones. These scabs, at first thin and transparent, become grayish yellow, and finally dark grayish green. Pains are felt in the frontal cells, a thick muco-purulent discharge is constantly hawked up from the pharynx, and a general feeling of discomfort about the head is complained of.

The general health becomes affected, the digestion sluggish, the blood impoverished, the skin colorless or of a leaden hue, and great depression of spirits follows, principally amongst women, who feeling that they are loathsome, shrink from company. This condition of things may last for years without any loss of cartilage or even ulceration of the mucous membranes. There are cases where ulceration takes place in the soft tissues at the base of the cartilage of the septum; this, however is always occasioned by the pressure and irritation of the finger nail in endeavoring to remove scabs constantly forming higher up in the nasal passages. The mucous membrane and sub-mucous areolar tissues are then the only parts involved in this affection.

It will hardly be necessarry to occupy the time of the reader with a *diagnosis* of this disease, as its slow progress and slower decline distinguish it at once from *influenza* or *coryza*. From the appearance at a certain stage it might easily be mistaken for syphilitic *ozœna*, but a careful investigation into the origin and progress of the disease will unmistakably mark the difference. Should the distinction not be recognized, however. at this period, its syphitic origin is sure to declare itself the moment that the bony tissue becomes involved.

The prognosis is always favorable, but in order to succeed in securing the time necessary to secure the disease, the physician should always prepare his patient for a long siege, otherwise he will become weary and dissatisfied, will abandon a regular treatment and throw himself headlong into the realms of *patent medicines*, or into the hands of all manner of quacks and itinerant doctors, and, at last, failing in his *search for a cure*, will become a confirmed melancholic.

Treatment.—Simple as the disease appears, limited, as it is, to a very small region of the body, and superficial as it remains during its whole course, it has baffled all efforts at speedy cure, whenever allowed to penetrate deeply into the complex and wonderful recesses of the nose and its appendages.

Ten years of constant experience in the treatment of this disease, has failed to bring forth an antidote—a specific cure. In that time, I have, however, succeeded in simplifying the treatment, and in shortening considerably the time of its duration.

Success rests principally in the restoration of the functions of the body to a healthy standard; in giving to the blood the fibrine and red corpuscles that have been diminished through the effects of the disease; in removing the stench from the nostrils of the affected one, which has naturally been a barrier between himself and social life, depriving him of its cheerful and healthful influence. Finally a cure is the reward of the combined efforts of physician and patient.

When the patient is anæmic, with impaired digestion, his liver torpid, I have found a combination of small doses of mercury with iron and quinine to answer very well in restoring the secretions and imparting renewed vigor.

℞.—Hydr. chl. corros. - - - - -	gr. iiij
Tinct. ferri. chlor. - - - - - -	℥j
Elixir cort. calisayæ (detannized) - -	℥v
	M.

Dose—A teaspoonful in a wineglassful of water three times a day at meals.

At the same time his diet should be restricted, and should consist of meats and meat juice, milk, eggs, and bread; that is, to be light, nourishing and blood-making. With the meat and eggs some preparation of pepsin should be given, until powers of digestion are restored. Out-door exercise should be strictly enforced.

In those cases where the functions of the liver are natural, but where the nervous system is enfeebled, the following combination generally suffices to restore the tone in the nervous element:

℞.—Acid. phosph. dil. - - - - - -	℥j
Ferri. pyrophosph. - - - - -	grs. c
Sulphatis strychniæ, - - - - -	grs. ij
Elixir gentian vel cort. calisaya detannized,	℥v
	M.

Dose—A teaspoonful three times a day, in a wineglass of water.

When anæmia is the most predominant symptom, in addition to one of the foregoing prescriptions, I give, for a time, a pill containing:

℞.—Sulph. ferri exsic. - - - - -	grs. xxx
Sulph. manganes, - - - - -	grs. xxx
Sulph. quiniæ, - - - - -	grs. xlv
Extract gentian, - - - - - -	q. s.

To be made into thirty pills. Take one three times a day, at meals.

The bowels should be kept regular and the patient's body and mind engaged in some active or recreating work.

The Local Treatment is always unpleasant, and generally painful, and for this reason I have simplified it as much as I possibly could. In the first place, the patient should be well instructed how to use an injection, or douche, through the nostrils. (I prefer the syringe, for the reason that the force of the current can always be regulated by the patient, himself.) When he can open his mouth sufficiently and breathe whilst the current is passing from one nostril to the other, and he made to understand that all the water must be allowed to flow out of the nasal passages before breathing through them, then he can be intrusted with that part of the treatment. During a ten years constant application of this method, I have not met with a case of inflammation of the middle ear produced by an injection, when used as above directed.

A solution of common salt, in warm water, has given better results than any other injection I have used; it is generally soothing, and washes out the passages very well. When this application is made three times a day, and the passages are well cleansed, no hard scab has time to form, the nauseous smell soon disappears, and the disease is checked in its progress.

When the disease is on the wane, light astringent injections may occasionally be used to an advantage. Acetate of lead, tannic acid, sulphate of quinine, may be used in weak solutions.

The patient should also be instructed how to mop the upper part of the pharynx, by a tongue depressor, if necessary, and to make local applications there with a curved camel's hair brush, or mop made with cotton wool; for such applications, I prefer a solution of chlorate of potash or of common salt, where there exists much irritation; and of turpentine when the circulation is sluggish and the parts are covered with a muco-purulent secretion.

Having the patient conversant with the use of the mop, the nasal passages cleansed and the pharynx attended to daily; the moment that these means are found to have caused a check in the progress of the disease, is the most favorable time for the physician to begin the local curative applications.

Of these I have found nitrate of silver to answer best, and use it almost exclusively. When a strong impression requires to be made on the mucous membrane, I use a solution of one hundred to one hundred and twenty grains to the ounce, with a very fine atomizer, washing off the parts immediately after with a solution of salt. When a stimulating influence is desired, a solution of ten to forty grains is best. Such applications should be made over the nasal passages and the pharynx once every fourth, sixth, or seventh day—judging from the effects produced—until the disease is entirely cured; otherwise, you will have the mortification of going back over the same routine with your patient, or of seeing him leave you dissatified.

The result of the above treatment will generally be as follows: The appetite returns, the coloring of the skin improves gradually, the weight of the body increases, the spirits become more buoyant, and your patient is not only grateful for the benefits obtained, but is anxious, among women, especially, to carry on strictly the directions of the physician until an entire restoration to health is obtained. Men generally abandon the treatment before its completion, and the result is, that, while there are some who do recover, many have a return of the disease and all of its unpleasant symptoms.

WHAT IS CINCHO-QUININE?

BY WALTER A. TAYLOR, PH. G., ATLANTA, GA.

The ATLANTA MEDICAL AND SURGICAL JOURNAL, for June, contains a communication from Dr. King, headed "Cinchona Alkaloids and their salts." In noticing it, I am reminded of the boy who, finding his aged sire bent over supporting himself, struck him a blow that felled him. The old man, recovering himself, demanded an explanation of his conduct, whereupon the boy said: "You sot so *far* for it I couldn't help it." It would be natural to infer that the writer would, "owing to the scarcity and high price of quinine," advocate the use of one of the cheaper cinchona alkaloids; but in this we were mistaken. He has undoubtedly employed the wrong heading, since his much valued substitute is neither an alkaloid nor an alkaloidal salt of the cinchona bark. He even goes so far as to condemn sulphate cinchonidia, the now best known substitute for sulphate quinine, giving an unqualified indorsement to the nostrum called cincho-quinine, an article which was thrown upon the market several years ago, by Jas. R. Nicholas & Co., now Billings, Clapp & Co., of Boston, Mass. (the ingenious and intelligent pharmacists of Dr. King.) The manner in which the profession was drawn to the nostrum is familiar to all. Not by the "smiles and graces of silver-tongued agents," but by diligent and profuse advertising, the manufacturers and their medical friends have represented it to be an alkaloidal representative of cinchona bark. With this, and the fact of its being much cheaper than the sulphate of quinia, they have "offered gold, and furnished gilded dross." The article has gained favor with many physicians, who administer it as a substitute for sulphate of quinine, but among the pharmacists, especially those who were educated to a professional standard, the nostrum was looked upon with suspicion, and soon after its introdaction was subjected to a chemical examination, in 1870, by Wm. T. Wenzell; in 1874, by Albert E. Ebert; in 1875, by Profs. Scheffer and Diehl, and others. Neither Wenzell nor Ebert were successful in determining the presence of quinia; Profs. Scheffer and Diehl found quinia, quinidia, and probably cinchonidia, in very small quantities; the other analysists succeeded in determining the presence of quinia, quinidia and cinchonia. The amount of each was not stated until 1876, when Mr. E. M. Wells, assisted by Prof. Jno. M. Maisch gave the following results (*American Journal of Pharmacy*, June, 1876,) "using for experiments two samples of cincho-quinine, which will be designated as "new" and "old." The new sample was obtained from the manufacturers in December, 1875; the old sample, July 18, 1873, from a firm in New York. The qualitative examination was conducted in the same manner as detailed by Profs. Scheffer and Diehl, (*American Journal of Pharmacy*, April, 1875,) and gave the same results, proving the presence ef ammonium sulphate, cinchonia sulphate, and cinchona alkaloids; also, a small quantity of organic matter, which could not be dissolved in alcohol, but remained behind with the ammonium sulphate, and with it was soluble in water."

The results of these assays, calculated for 100 parts of material, were as follows:

	New sample.		Old sample.	
Sulphuric acid (SO3),	6.516		5.016	
Ammonium (NH4),	1.360		1.380	
Water, determined by heat,	4.098		3.174	
Loss (mainly water of crystallization),	0.359		0.040	
Total non-alkaloid matter,	——	12.333	——	9.610
Quinia,	0.466		0.240	
Quinidia,	1.250		1.820	
Cinchonidia,	0.717		0.920	
Resin and loss,	0.583			
Cinchonia,	1.384		2.440	
Total am't dissolved by first treatment with ether,		4 400		5.420
Cinchonia left undiss'lved on first treatm't with ether,		83.267		84.970
		100.090		100.000

"The total amount of cinchonia, a portion of which is combined with sulphuric acid, was, therefore, 84.651 per cent. in the new, and 87.410 per cent. in the old sample; while the quinia was present in one case to the amount only of less than one-half, and in one sample less than one-quarter of one per cent."

In connection with the above, I shall also give the remarks of Prof. Jno. M. Maisch. At the close of Mr. Wells' article, he states that:

"It will be of interest to recapitulate, in connection with the above assay, the quantitative results obtained in previous analyses, more particularly the amount of the three higher priced alkaloids, present in cincho-quinine, which form the correct basis for estimating its commercial as well as medicinal value. Wenzell obtained 2.5 per cent., Scheffer and Diehl (see *Amer. Jour. Phar.*, 1875, p. 205,) from four samples, 3.00, 3.25, 2.15 and 3.10 per cent., and Wells (4.400—1.384=) 3.016 and (5.420—2.440=) 2.980 per cent.; the average of these seven assays gives 2.86 per cent. of higher priced cinchona alkaloids, from which figure the lowest amount on record differs by .71 or 25 per cent., and the highest amount recorded by .39 or nearly 14 per cent., while the proportion of the lowest to the highest figure, 2.15 and 3.25, is as 2:3.

A still greater variation is observable in the percentage of quinia, small as it is; the lowest one found (Wells) being ·24, and the highest (Scheffer and Diehl) ·612 per cent., their proportion is nearly as 2:5. Mr. Wells has estimated the amount of ammonium from which the ammonium sulphate in the two samples proves to be 5·44 and 5·52 per cent., representing respectively 3.40 and 3.45 of the sulphuric acid, which deducted from the assayed amounts of the latter, leave 3.116 and 1.566 per cent. of in combination SO_3 with alkaloids. Allowing this to be combined with cinchonia, we find the following percentage of cinchonia sulphate (which contains 10.69 per cent. SO_3) in Wells' old sample 14.69, and in his new sample 29.23 per cent., or within a slight fraction, double the amount. The amount of alkaloïdal sulphate, approximated by Scheffer and Diehl, by treatment with cold water, varied in four samples between 11.75 and 22 per cent.; a variation nearly as great as found by Mr. Wells. If the figures, as obtained by the different analysists, an average for the various compounds actually contained in cincho-quinine, and the ammonium sulphate be entirely omitted, a preparation closely resembling the *average* composition of the article in question, may be obtained by intimately mixing

Quinia, alkaloid,	5 grains,	or	Quinia sulphate,	7·5 grains
Quinidia alkaloid,	15 grains,		Quinidia sulphate,	20· grains
Cinchonidia, Alkaloid,	10 grains,		Cinchonidia sulphate,	12·5 grains
Cinchonia, alkaloid,	770 grains,		Cinchonia sulphate,	180· grains
Cinchonia, sulphate,	200 grains,		Cinchonia, alkaloid,	780· grains
	1,000 grains.			1,000 grains

Those who desire a still closer representation, may incorporate with either of the above mixtures 54 grains of ammonium sulphate, which will not enhance the cost but increase the weight of this, as some medical journalists tell us, *valuable* "nostrum."

I shall now endeavor to correct some statements made in Dr. King's paper, but I shall add here, that it is not my purpose to doubt the individual experience of his specific, but we cannot fail to regard it as a little singular, that in giving the thereupeutical effects and chemistry of the article in question, he should so rely upon the statements made by Messrs. Billings, Clapp & Co., in a circular extolling the praises of cincho-quinine. The following are some of his statements:

"Cincho-quinine is a combination of all the active medical principles of the best calisaya bark, etc., etc., possessing all the *advantages* with none of the *disadvantages* of sulphate of quinia, or any of the single alkaloids of the cinchonas. It is entirely free from such external agents as sugar, liquorice, starch, magnesia, etc. It is *wholly* composed of the bark alkaloids, quinia, cinchonia, quinidia, cinchonidia, and other alkaloidal principles which have not been distinctly isolated, and the precise nature of which is not well understood, etc., etc. In its preparation all the active tonic and febrifuge principles of the bark are secured without the inert bulky lignin, gum tannic acid, etc., etc. It exerts the full therapeutic influence of sulphate of quinia, in the *same dose*, without oppressing the stomach or creating nausea. It seldom produces cerebral distress as quinine does, and I have found it to produce much less constitutional disturbance than the latter agent, etc., etc. One of the main points I desire to impress upon the minds of those who read this article is, that cincho-quinine is not sulphate of cinchonidia not sulphate of quinine, but all the alkalids in combination, and it is this *composition*, this representation of all the medicinal principles found in Peruvian bark, that gives it the value claimed for it over and above all other preparations, or any one of the alkaloids," etc., etc.

(Billings, Clapp & Co., in a circular, make the above statement almost verbatim). In answer to the above, I will state that cincho-quinine (as I think I have shown from the analysis) is not a representation of calisaya bark, but to the contrary, it consists mainly of cinchonia and its sulphate, and in one case was found to consist of less than one half, and in another less than one quarter of one per cent. of quinia. It does contain sulphuric acid and sulphate of ammonium, consequently does contain substances not naturally existing in cinchonia bark. It does contain a portion of alkaloids in acid combination, chief among which is sulphate of cinchonia, which in connection with the alkaloid cinchonia amounts to about 85 to 87 per cent.

Again, it is singular that he should be so down upon some of our leading manufacturing chemists. There are but three in this country that manufacture the cinchona alkaloids, and I am sure that neither one of them concede to themselves the praise of being the discoverer of any of the cinchona alkaloids, and will never do so foolish a thing as to attack that specific quinine. They offer simply a substitute, cinchonidia, an alkaloid first obtained and characterised under the name of quinidine (quinidia) in 1847, by F. L. Winckler, of Darmstadt, and in 1852, it was more closely studied in Liebig's laboratory by Leers, still under the same name, so we see that it was not discovered prior to 1835. Supernumeraries are never called in when the originals are so easy of access. Quinine will be used by those who are able to take it as long as it is manufactured. Physicians who have reputation at stake, and when there is a call for THE ANTI-PERIODIC, will, until reason deserts the votaries of medicine, prescribe it, despite the assertion of an occasional M.D., Ph.G., or manufacturer, who says it is too "*expensive.*"

Bare assertions never yet dimmed the reputation of a fact which had for its foundation practical experience. The experience of over a thousand M.D.'s in these United States, is at variance with Dr. King, in his assertions, that it requires three or four times as much sulphate of cinchonidia, as of sulphate of quinine, to secure the "symptoms of true quininism," and fully as many of the honored fraternity bear testimony that as an antiperiodic, it is *not* perfectly worthless, unless given in three or four times the dose of sulphate of quinia.

THE NEW CHEMICAL NOTATION.

BY J. H. LOGAN, A.M., M.D., ATLANTA, GA.

In our short paper on Chemical Nomenclature, the irresponsible types saw proper to represent us in one place, at least, as writing what we did not mean to write, and we must take this opportunity to correct it. On page 152 we did not say: "They are carbonic dioxide and carbonic ACIDS," but they are carbonic dioxide and carbonic oxide—the only known compounds of carbon and oxygen.

In the same paper, we promised to show secondly, that where the system of nomenclature fails, or falls short of its design, its place is supplied by a still more comprehensive and admirable system of notation; and that, whenever this appears to present perplexing difficulties, they may be traced partly to the impatience of prejudice, and partly to the abstruce nature of the subject embraced in the discoveries of a rapidly advancing science.

In the notation—the new notation—of chemistry there is an argument for the existence of atoms and molecules, intimates Prof. Cook, in the very beauty of its admirable power to express their mysterious chemical union and products. It reminds one vividly of the presumptive argument for the undulatory theory of light, found from the analogy of air vibrations in the possibilities of sound.

It was in 1815 that the celebrated Berzelius first suggested the idea of symbols for the representation of atoms and molecules in chemical elements and compounds, little dreaming, doubtless, like the great Genoese navigator, of the real extent and importance of the invention his genius was conferring upon the world. Yet, so unpretentious and transparent is the entire system, that in its very simplicity we are in danger of losing sight of the real greatness of its conception, and that it is worthy of the admiration of sages, as well as of children. Besides simplicity, familiarity too, often blunts the perception of worth, and we know but one thing in all the world of science, to which, in this regard, we can compare this notation of chemistry, and, as it should be for a sound argument, it is something of the same kind—it is the Arabic notation, which, indeed, underlies the whole system of mathematics. We challenge any man to point out a more seemingly childish, and yet grander thing in reality than that notation. It is associated with all that is joyous or unhappy in schoolboy days, and is the very warp of the highest mathematical reasoning of our ripest manhood. Truant history withholds the name of the man whose genius was capable of such scientific devising, but this civilization and the ideal civilization of the future, will, with one consent, could his name be certainly known, erect to his memory a monument more enduring than brass.

Did you ever pause, for one moment, to think, in your almost hourly use of this simple invention, how a child can use it—can amuse or serve himself with it—can understand it, and man can transact with it all that is necessary in the most varied and complex commercial relations, and yet the child, by a few strokes of his pencil, can express with its characters and combinations, what neither himself, nor an Aristotle has intellectual power to grasp? This is one of the essential characteristics of the sublimity of the things we know to be sublime. It is true of great books—of the Bible, Pilgrim's Progress and of Milton's immortal epic. It is true of sublime buildings, and mountains, and waterfalls, and equally of sublime men—of Moses and Luther, and the great Apostle to the Gentiles.

These remarkable facts illustrate what is substantially true of chemical notation, though in a more limited field. Nothing, it will be presently seen, is simpler in its contrivance, and yet few things are more comprehensive, or expansive, in practical applications, than it. It enables us to write, with facility, all we desire to preserve, or study, or transmit, and what a child can read and understand in the science; and, with equal ease, its unlimited symbolical power of expression transcends the capabilities of the mind, to follow it into what it plainly intimates, a mysterious and fearfully potent molecular motion and arrangement. In other words, in chemistry, as in Arabic decimals, we can write with the utmost dispatch, what we cannot, with any dispatch, either express in language, or at all comprehend. The written expression of number has no limit but the intellectual incapacity to understand and give it utterance.

What, then, is chemical notation? It may be thus defined: Notation in chemistry is a system which provides, by means of certain symbols, signs and numerals, properly written, either alone or in conjunction, for the expression in brief, of any element, compound, or reaction known to chemistry. The elemental symbols have been already given and explained in the article on Nomenclature; it is not necessary to repeat them here. H is the symbol of hydrogen gas, and H H, the formula for the simple hydrogen molecule. H expresses not only the fact that an atom of hydrogen is present, but the additional fact that its atomic weight is invariably one; not proportionally, but permanently. H H can be written H_2, in which 2, as in algebra, may be called an exponent, but it does not express here, as there, a power, but a multiple; it means two atoms of hydrogen, and not the atom multiplied upon itself. HCl is the symbolical formula for the compound molecule of hydrochloric acid. It is compound because it is made of atoms of different kinds, and clearly conveys the information that chemical union has taken place between the hydrogen and chlorine, and, moreover, that the atoms thus combined, are equal in chemical value, or have the same atomicicity, for the one just neutralizes the other. The nomenclature of the molecule is, of course, hydric chloride.

A somewhat more complex molecule is that of water, H_2 O; and, simple as it may appear, this water molecule is the border land of difference between the old and new chemistry. Prof. Cook remarks that the difference between the notation of H O and H_2 O, is of a type with the whole difference between the old and new schools of chemistry. The two symbols may be regarded as the SHIBBOLETHS of the two systems. An improved notation, therefore, lies at the foundation of the whole superstructure of the modern science.

The symbol H O fairly states the *proportions* with which hydrogen and oxygen unite to form water, but H O is not the formula of the water molecule, for the simple reason that, though sufficiently expressive of the atomic presence of each element, it fails to give the atomic weight of oxygen. It has just been remarked that an essential principle of the new notation is, that the symbol not only designates an atom of each element, but its atomic weight as well.

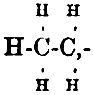
The old chemistry knew nothing of atomic weights in the proper sense of the term; its numerical equivalents were mere proportions, which could be changed at pleasure. While the English school, chiefly, selected hydrogen as the basis or standard of their system, the Germans made choice of oxygen; in each system of course, the proportions were the same, but the numbers quite different. If atomic weights are no more than so many proportionate numbers, it is obviously a matter of perfect indifference whether the water molecule be written, H_2 O, HO_2, H O or H_2O_2, for the numerical values given to the letters, as symbols are purely arbitrary. All is now changed; the new chemistry, as the old, has its combining proportions, but those proportions are not necessarily in every case, the atomic weights of elements.

H O symbolizes a fact equally accepted in both systems, viz: that hydrogen and oxygen unite in the proportion of 1 to 8, to form water, for it is identical with the proportion $H_2 O$, oxygen being 16 by weight; and this, and not 8, is this atomic weight of oxygen, hydrogen being 1; that is 16 is the least portion, by weight, of oxygen that will combine with hydrogen, and two atoms of hydrogen and one of oxygen constitute the molecule of water. A volume of steam weighs nine times as much as the same volume of hydrogen, but the molecule, or two volumes of hydrogen is 2, therefore the molecular weight of water is 18, and hence its molecule contains twice as much of each constituent, 2 and 16.

Atomic weights are no longer a mere sliding scale of proportional numbers, like specific gravity, but fixed and permanent quantities; referred to hydrogen they are as fixed and definite as the numbers used to express the absolute weight of matter—they are the "fundamental constants of chemistry." Numerals are, also, frequently prefixed to molecules, and correspond in use to the coeficient of algebra. $H_2 O$ represents one molecule of water; $2 H_2 O$, two molecules, and $6 H_2 O$, six; the coeficient in each case, multiplying the exponents expressed and understood.

Another and more complex formula, is, that of alcohol, $C_2 H_6 O$, but with the explanations already given, it is easily understood. It clearly indicates just what chemistry says alcohol is, a molecule composed of two atoms or twenty-four parts by weight of carbon, six atoms or six parts by weight of hydrogen, and one atom, or sixteen parts by weights of oxygen, and the weight of the whole, or its molecular weight to be 46, that is 46 times the weight of an equal volume of hydrogen. This is its notation; its nomenclature requires a little explanation. The name alcohol is purely arbitrary, given it by the alchemists of the ninth century, before chemistry was known. What is its chemical name? The Lavoisierian rule must not be forgotten. The names of compounds should be derived from those of their constituents. Now the alcohol molecule can be divided into two well known compound radicals, $C_2 H_5$ ethyl, and $H O$, hydroxyl, that is, compounds which are capable of all the chemical behavior of simple elements, and hence their name in contradistinction to simple radicals. The molecule may be written, thus $(C_2 H_5), H O$, and read ethyl hydrate just as K H O, and Na H O are potassic and sodic hydrates. It is sufficient to remark that this hydroxyl H O, has a very different meaning from that of the same symbol used in connection with water; H O, expressive of the proportions in which the two gases unite to form water, is quite different from H O as the definite molecule of a possible or impossible substance. It is unbalanced—lacks an atom of hydrogen to become water, and has therefore, no free existence. Graphically it is, H—O—, having one unemployed link: the other radical satisfies that link and forms alcohol.

We remarked that the new doctrines of quantivalence and substitution are intimately associated with notation; this alcohol molecule is a good example of it. You know what quantivalence is; it is the power of an atom to neutralize hydrogen units, or to take their place by substitution. Now it is a curious fact, not yet understood, that many of the elements have a variable quantivalence; but carbons is generally four, indicated by Roman numerals, while hydrogen has always one. The radical ethyl may be again written $\overset{IV}{C}_2\ \overset{V}{H}_5$, or graphically,



$\begin{matrix} & H & H & \\ & | & | & \\ H- & C & -C, & - \\ & | & | & \\ & H & H & \end{matrix}$

showing that all the bonds of the molecule are engaged, but one; so that ethyl is a MONAD radical.

At this point, we may apply the principle either of substitution or of direct union. $C_2 H_4$ is a saturated molecule, since the quantivalence of C, is here dyadic; ethyl can, therefore, be written, $C_2 H_4 H$, and on the addition of hydroxyl, H O, to this, one of whose hydrogen atoms is wanting, direct combination takes place between it, and the isolated hydrogen of ethyl forming water; and the whole molecule becomes $C_2 H_4 H_2 O$ or $C_2 H_6 O$, alcohol again. To get the same result by substitution, write the graphic formula of water, H-O-H, and instead of H O's being added to, let ethyl be substituted for one of the atoms of hydrogen, for being a monad radical, it will replace it and give the formula, $H\text{-}O\text{-}C_2 H_5$, or $C_2 H_6 O$, alcohol once more.

In conclusion, we give the rule for the management of exponents, when atoms of different quantivalence combine. Each t, of course, furnish the same number of bonds, and this number is found from the quantivalances. This is the rule: Find the least common multiple of the two quantivalences; divide this number by the quantevalences in succession, and the result in each case, will be the number of atoms for that constituent.

Examples: Let $\overset{I}{H}$ and $\overset{II}{O}$ combine. Find the least common multiple of 1 and 2; this is 2; now divide 2 by 1, the quantivalence of H, and it gives 2 as the exponent of H: divide the same by 2, the quantivalence of O, and the result is 1 for the exponent of O. Hence the required formula is $H_2 O$.

$\overset{VI}{S}$ and $\overset{II}{O}$, a hexad and dyad will form SO_3; for the least common multiple of the quantivalences is 6, and the results of division respectively, are 1 and 3, hence the formula is as written above.

This, now, is the head and front of chemical notation, and there is no system, of its kind, in all the circle of the sciences, the mathematics excepted, so admirable and complete. Its illustrious author, Berzelins, in its construction, obviously, wise as he was, builded better than he knew; for it has already, since his day, in great part, superseded the nomenclature, itself scarcely surpassed as a system, and is, at this moment, in the hands of the most distinguished chemists of the world, powerfully aiding in the advancement of the science to new fields of investigation and discovery.

MENINGITIS.

By C. A. HENTZ, M.D., Quincy, Fla.

Amongst the many communications on the subject of epidemic meningitis which have appeared in the journals, I have seen no suggestion made of a mode of treatment which I adopted some years ago, and which was attended with results so gratifying, that I have been anxious to see the suggestion thrown out to the medical profession, so that, if there is anything in it that may lead to a better management of this dreadful disease, suffering humanity may the sooner get the benefit of its adoption.

I have practiced through two malignant epidemic visitations of this disease; one in Jackson county, in this State, in 1857; and one in this place, Quincy, in January and February, 1870, and I became thoroughly disheartened with the utter uselessness of all efforts at cure in the usual routine way. Having observed that hot applications to the head were often grateful in cephalalgia from cold, I determined, during the prevalence of the last mentioned epidemic, to try them in meningitis.

The first case in which I made the experiment was that of a gentleman about fifty years of age, a merchant of this place, a gentleman of intelligence, and of rather a delicate constitution. He was suddenly and violently attacked with the most alarming symptoms; high fever, excruciating pain in the head, and still more severe about the middle of the spine; bloodshot eyes, scintillations of light, delirium coming on, etc., etc., symptoms so generally followed by insensibility and death. Having obtained the consent of the patient to the experiment, I proceeded at once to its energetic adoption; I first placed a sinapism to the spine, twelve inches wide, and reaching from the occiput to the sacrum, and let it stay; I had boiling water brought from the kitchen by the kettleful, and tempered with cold water to a degree of heat as great as he could possibly bear; had him supported by the shoulders over a tub placed by the bedside, and had this excessively hot water poured dipperful after dipperful, slowly and continuously over the head, for an hour or two, the patient meanwhile expressing a grateful sense of relief. I then had flannel petticoats wrung out of hot water, as hot as he could stand, wrapped round the head, and changed regularly, so as to sustain the heat continuously, for some twelve hours more. After this, as he improved, I substituted hot dry, for hot wet applications; winding up with simple dry flannel wrappings.

I gave internally, calomel in purgative doses till it operated well, and quinine in 20 grain doses, every two hours, till about two drachms were taken. It was well borne, and the case convalesced most favorably.

I did not have the opportunity to test this mode of practice in many cases, as the epidemic was on the wane, but in those where it was employed, the result was equally satisfactory. Not having notes of these cases, I cannot report them.

After unvarying failure with bleeding and cupping, leaching, blistering, ice, purging, etc., etc., the success attending this new departure in the way of treatment, has encouraged me to hope that in following out this suggestion, we can hereafter more successfully combat this terrible form of disease.

Selections.

TRISMUS NASCENTIUM.—*By J. N. Dixon, M.D., Springfield, Ills.* On the 3d day of February I was invited by Dr. Rowler to see with him an interesting case of trismus nascentium. Upon our arrival, found the patient, a fine and well developed male child, ten days old, suffering from a well marked case of trismus, with spasms recurring every ten or fifteen minutes, increasing in frequency and severity. The jaws were firmly locked, and the lips slightly separated and pressed firmly against the gums; the angles of the mouth were drawn backwards and downwards; pulse hardly perceptible; skin warm and perspiring; abdomen slightly swollen and tympanitic.

Dr. R. informed me that he first saw the patient on the evening of February 1st, and since then the child has neither slept nor taken a particle of nourishment of any kind. The treatment had been purgation, emesis, the hot bath, local application of ice to the spine, and tincture physostigma, with the usual routine of constitutional treatment; but without any appreciable benefit. Prognosis—Evidently cannot live many hours.

Having had no experience in the treatment of this disease, and knowing that our most eminent authors recommend the above treatment, I was at a loss to suggest any plan that would benefit our little patient; but remembering of having read an article a few years ago in a medical journal—the name of which I cannot now recall—on the local application of chloroform to the spine for the relief of spasms, and as a last resort, I suggested to Dr. R. giving it a trial. The experiment—for experiment it was—was considered worthy of a trial. I would here state, that with the treatment already detailed, the *inhalation* of chloroform had been thoroughly tried, and found to afford relief only when *total* anæsthesia was produced, and only so long as this condition was sustained. As I said before, the experiment was considered worthy of a trial, and the application was made by saturating a strip of soft cotton cloth with chloroform, and applying it to the entire length of the spine, just as the approach of another paroxysm was announced. As a result of the application, the paroxysm was averted, and in less than fifteen minutes our little patient fell into a quiet sleep, which lasted nearly two hours. Anxious to watch the effects and influence of the chloroform thus applied, we remained with our little patient several hours, during which time several paroxysms were averted by the timely and continuous application of chloroform. For the next thirty-six hours there were occasional tetanic symptoms, which, however, promptly and invariably yielded to the application of the chloroform. The subsequent convalescence was rather slow, but entirely satisfactory.

So satisfied was I with the results of the treatment of this case, and so anxious was I to have another opportunity of testing its efficacy, that I waited very impatiently indeed; but at last it came.

On the 31st of May I delivered Mrs. McB. of a healthy and well developed male child at full term. Both mother and child progressed as usual until June 6th, when I was called to see the child. The mother stated that for the last ten hours it was with great difficulty that the child nursed, although appearing anxious to nurse, and eagerly pressing its mouth against the nipple; at the same time it continued to utter a whimpering, whining, unnatural cry. While the mother was describing the symptoms, I diagnosed the case trismus, but still wanted the pathognomonic symptom, spasms. My diagnosis was soon verified, for before I left the house the child had a violent paroxysm, which lasted several minutes. As soon as possible I applied a strip of cloth, saturated with chloroform, to the entire spine, covering it immediately with oiled silk to prevent evaporation. The result was indeed gratifying. The spasms were promptly and completely arrested, and in a few minutes the child fell into a quiet, calm, and seemingly natural sleep, which lasted three hours. Ordered that the application be applied immediately whenever there was the slightest indications of a return of the paroxysms. Invariably upon the subsidence of the burning pain immediately incident to the application of the chloroform, and which lasted only a few minutes, the child would fall into a peaceful and quiet sleep. The application was continued in this manner for three days, when I was compelled to discontinue it for a time and apply emollients, on account of the vesication produced. During the application of the emollients, a recurrence of the paroxysms was carefully guarded against by the cautious administration of chloroform by inhalation. Of course attention was given to sustaining the child with nourishment, and the bowels were kept open with mild laxatives. At the expiration of forty-eight hours I re-applied the chloroform to the spine, alternating it with inhalation and the emollient applications when necessary.

The convalescence was rapid, and without any unfavorable symptoms.

These two cases are of course too limited to predicate a treatment upon, from which universal and unfailing success is to be expected, but from the unprecedented success thus far resulting from local anæsthesia in the treatment of trismus nascentium, I cannot but think that those who may have occasion or opportunity to give it a fair and impartial trial in the treatment of this exceedingly distressing and generally fatal disease, will have no occasion to be dissatisfied with the results.—*Ohio Medical Recorder.*

DANGER FROM HYPODERMIC INJECTIONS.—*By E. Fletcher Ingals, M.D.*—I have often used hypodermic injections of morphia, and always with good results, until a few weeks since, when I obtained alarming results from the administration by this method of one-fourth of a grain of morphia.

The patient, in consequence of continuous watching with sick children, had become debilitated, and as a result, suffered at times from severe pains of a neuralgic character.

I was called in the night to see her in one of these attacks. The pain had commenced about twelve hours previously, and with frequent exacerbations, had steadily increased in severity until it had become unbearable.

I dissolved one-fourth of a grain of morphia in pure water, and administered it under the integuments on the outer side of the arm. Within a few seconds the breathing became stertorous, the pulse failed, the lips and countenance became livid, and the eyes were set; respiration ceased, the radial and cardiac pulsations were lost, and the heart sounds could not be distinguished. The woman was to all appearances dead. How long this condition continued I cannot tell; it seemed an age, but was probably only ten or fifteen seconds, for by prompt means I succeeded in resuscitating my patient.

After a few minutes she expressed herself as much relieved. I remained with her some time, and then left careful directions with the husband in case any other unfavorable symptoms should occur. During the next few hours the patient fainted twice, but she was restored by dashes of water in the face.

This case called to mind what I had recently heard from Doctor Wenger, regarding the use of hypodermic injections. I wrote him, requesting notes of accidents which had fallen under his observation, and he kindly sent me the following reply:

GILMAN, ILL., June 4, 1877.

E. F. INGALS, M.D., Chicago.—*Dear Doctor*—Your favor of the 29th ult. received and contents noted. I am very glad that your attention has been called to the subject of injecting morphine into the system. I have used it myself, but never without some fear; fortunately I have not had any bad results from it, and think I never will. I herewith send you a hasty prepared paper on the subject, which you are at liberty to use as you think best. The last case mentioned was my mother-in-law, the physician a most excellent man; the disappintment, remorse and regret that will follow him through life, is enough to deter any man from ever using the instrument, that knows anything about the case.

Very respectfully yours, E. WENGER.

The paper reads as follows:

That medicine will enter the circulation by absorption from blistered surfaces, and produce its constitutional effects, has been known for a long time, but the introduction of medicine into the system hypodermically, by mechanical means, is, I believe, of rather recent origin. And so popular has this new plan of administering medicine become, that almost every physician is armed with a hypodermic syringe, ready to perform the squirting operation upon the patient for almost every ache or pain, and I believe the profession generally sanction it as a safe and harmless means of relief, especially the young and more enthusiastic.

To condemn the practice as pernicious and unjustifiable, would be rather a bold step just now, but I desire to call the attention of the profession to a few cases that have come under my observation, the result of which have been sufficient to convince me that to inject morphine into the circulation is dangerous, and should never be done when there is any possible means of giving it in any other way.

Case 1. I was called to see a woman in her fifth confinement. On my arrival, found her in convulsions. Another physician had been called, who arrived in a few moments. I at once suggested bleeding. The doctor had just bought a hypodermic syringe (the first I had ever seen,) and suggested the injection of morphine, to which I assented. The effects of the convulsion, or the injected morphine, brought on a heavy stupor, with slow, stertorous breathing, from which she could not be aroused. I delivered her with the forceps. She slept on until she breathed her last.

Case 2. An old gentleman was suffering with rheumatism; he was attended by a promising young physician who had gained some notoriety by the use of the hypodermic syringe. He injected morphine on this occasion, and in a few minutes became alarmed at the condition of his patient. He at once sent for another physician, who, on his arrival, learned the condition of things. Noble-hearted man that he was, to save the young man's reputation, he pronounced it a case of appoplexy. By prompt and persevering treatment, he succeeded in saving the old man's life. He then advised the young man in a friendly way, to be a little cautious how he used the squirt in the future.

Case 3. Mrs. W., aged about 56, had pain in one of her shoulders; in the morning she called the family physician, a man of knowledge and experience. He injected morphine into the arm, and relieved her in a few minutes; in the evening he called again, and found his patient well, but thought to secure a good night's rest, it would be well to inject a little more morphine, which he did, and in thirty minutes his patient was a corpse. The feelings of the doctor can be better imagined than expressed.

I have other cases that I could mention, but these are enough to satisfy me that the hypodermic syringe should never be used where there is any possible way of giving the medicine in any other way. E. Wenger, M.D.

Gilman, Ill., June 1, 1877.

Since writing the above I have inquired of a few of my medical friends and find that several of them have had unpleasant experiences with the use of morphia by hypodermic injections. Two of my friends have had cases almost identical with my own, and doubtless many others have come under the observation of those who have made extensive use of this method of treatment.

I am satisfied that no precaution can be taken which will insure us against accidents from this mode of treatment.

E. F. I.

Acute Rheumatism Treated wilh Salicylic Acid.—*By Joseph D. Lomax, M.D., Medical Superintendent Marshall Infirmary, Troy, N. Y.*—The history of the following cases of acute rheumatism, treated in this hospital with salicylic acid, may be of interest to some of your readers. It includes all the cases of this disease that have been treated thus far with this remedy in the wards of the Marshall Infirmary.

I have reported the cases briefly, omitting to mention cardiac complications, and the effect of the medicine on the pulse and temperature, my principal object being to show the duration of the disease under this treatment, and the speedy relief which it brings to the patient.

The plan of treatment we employed was that adopted at the Bellevue Hospital, New York, as reported by Prof. Clark in the *Medical Record* for October 14th, 1876. The following is the prescription:

℞.—Salicylic Acid, ... ʒiij
Bicarb. Soda, ... ʒij
Glycerine,
Water, ... aa. ℥ij. M.

Of this a tablespoonful is given every two hours for the first day, and afterward the same dose is given every six hours.

Case 1.—Male, aged 24, peddler, admitted November 18th, 1876. He had been ill two weeks; most of the joints of the lower extremities were red and swollen, and so painful that locomotion was almost impossible. Treatment was commenced at once, and the next day the joints were less painful, and could be bent with considerable ease. The patient contintinued to improve, and on the fifth day was up walking about the ward, feeling quite comfortable. On the seventh day treatment for rheumatism was suspended, as all the symptoms had subsided.

Case 2.—Male, aged 21, bar-tender, admitted December 11th, 1876. He had been ill three days; most of the joints of the extremities were affected, and those of the lower limbs so painful that walking was impossible. He was placed under treatment at once. The limbs could be moved with less discomfort. On the 14th he was able to be up and walking about the ward. The patient continued to improve rapidly, and was discharged on the 18th, feeling well enough to go to work.

Case 3.—Male, aged thirty-one, grocer's clerk, admitted December 19th, 1876. He had been ill one week. The disease was confined mainly to the lower extremities, attacking the larger joints, which were swollen, and so painful that locomotion was impossible. Treatment was commenced at once, and in twenty-four hours the joints were less sensitive, and could be bent quite readily. On the third day of treatment he was able to walk across the ward. The patient continued to improve, and on the 24th asked to be discharged. He went to work in a few days after.

Case 4.—Female, aged about twenty, attendant in the insane department of this institution, admitted April 15th, 1877. She had had, for a week or two, more or less pain in her joints, but during the twenty-four hours preceding her admission she grew rapidly worse, and had become almost helpless; the disease had invaded not only many of the articulations of the limbs, but also many of those in the upper portion of the spinal column. She was put under treatment at once. The next day the progress of the disease seemed arrested, the joints were not so sensitive, and could be flexed with less discomfort. On the 19th, or fourth day of treatment, she was up, feeling quite free from pain in the joints and back. She continued to improve, and on the 22d returned to her duties in the asylum.

Case 5.—Male, aged 31, farm laborer, admitted May 22d, 1877. He had been ill three days, and many of the joints of the extremities had become more or less involved, rendering him unable to walk or feed himself. Treatment was commenced at once. The following day the pain was much relieved, and the limbs could be bent quite readily. He continued to improve, and on the 26th he was able, unassisted, to go down two flights of stairs to the lawn, and return. He was discharged, at his own request, on the 30th, feeling very well.

With the exception of Case 5, none of these patients complained of any unpleasant effects from the medicine. In two or three cases there were some deafness and ringing in the ears. In the female these symptoms were very marked, and this patient suffered for two or three weeks, after returning to work, from headache. She had never before been subject to headache.

To the cases reported above I will add the following:

The daughter of the reporter, aged 6 years. Symptoms of acute rheumatism were detected on the 13th of May last. The salicylic treatment was not begun until the following day, when many of the joints had become involved; in fact, the disease seemed to have invaded the articulations generally. Those in the upper portion of the spinal column were very sensitive, and when disturbed caused much distress. The little sufferer could not be moved without exciting much pain. The pulse was 140, and the temperature, taken in one of the axillæ, marked 101⅘°. The first dose of medicine was given in the morning, 14th, and the same directions were observed in the treatment of this as were followed in the preceding cases, the dose being reduced to one teaspoonful. The next day, the 15th, the progress of the disease seemed arrested, the joints were less painful, and the patient could be moved more easily. The pulse had fallen to 128, and the temperature to 100¼. On the 16th the right elbow and left knee, also the back, were still very sensitive to motion, but the other affected articulations were less painful, and the patient could move herself a little. The pulse was 112, and the temperature 99. During the five succeeding days there seemed to be no further progress toward improvement, and the following change was then made in the prescription:

℞.—Salicylic Acid, ... ʒiij
Bicarb. Pot., ... ʒj
Wine Colch. Sem., ... ʒv
Glycerine,
Water, ... aa ℥iv. M.

Of this two teaspoonfuls were given every six hours. This was continued for four days, but without any apparent beneficial results, and further experiments with salicylic acid were not made.

It is now seven weeks since the attack commenced, and the heart has been examined from time to time during the progress of the disease by several physicians, and no cardiac complication has yet been discovered. If this organ has escaped, an interesting question, it seems to me, might suggest itself, namely: whether this immunity is due to the particular kind of treatment adopted, or was this patient one of the favored five out of two hundred children attacked with acute rheumatism who escape heart complication? Such questions, of course, can be decided only by statistics, and hence I have reported this case.—*Med. and Surg. Reporter.*

A Case of Successful Extirpation of the Parotid Gland.—*By J. M. Pace, M.D., Camden, Ark.*—In regard to the extirpation of this gland, a great many surgeons of eminence have doubted the practicability of the operation, and questioned the fact of its having ever been performed. Velpeau says, "should we take literally true, what authors of the last century have said of it, nothing could be more simple than the total eradication of the parotid gland. In our own times, on the contrary, nothing seems to be more uncommon—so much so, that numerous distinguished surgeons deny even its possibility." He also states that most of the cases reported are not conclusive, believing, with Boerhave and others, that in most instances, it was merely ablation of lymphatic tumors, developed in the depths of the parotid space. Allen Burns thought the operation impracticable. Cooper, however, says, to deny that the gland was ever extirpated, would be to impeach the veracity of some of our most eminent anatomists and surgeons; that no one will doubt the danger attending the operation; but to assert that it cannot be performed, is not only absurd, but not in keeping with the progress of the age.

Siebold professes to have extirpated the gland in 1796; Beclard in 1823; Gensoul, 1824; Prieger, 1826. Subsequently a host of other surgeons claim to have performed the operation. The late Dr. Geo. McClellan, of Philadelphia, is foremost in the ranks of American surgeons, having operated upon *eleven* cases with but one death.

Tumors—malignant and non-malignant—are often developed in the parotid gland, the nature of which it is often no easy matter to diagnose by merely superficial examination. Encephaloid tumors usually grow rapidly, attaining a large size. Scirrhus is more slow in its development, smaller in size, and very much more painful, though the latter symptom is not always pathognomonic of cancer; for even fibrous tumors often cause intense pain from pressure upon the surrounding nerves. Scirrhus tumors are usually solidly fixed, with ill-defined outlines; whereas, fibrous tumors are more movable and the mass is well defined.

The case that I have to report, as regards its malignant or non-malignant character, was hard to distinguish, not only because of the usual difficulty of diagnosing these morbid growths, but its extirpation had been attempted by another physician some months previously, which left a cicatrix and the surrounding integument in a glazed, purplish condition, and a tumor with ill-defined outlines, more or less resembling a malignant growth.

The subject was Miss L., aged about twenty-seven years, of a lymphatic temperament, general health good. Before proceeding to operate, I gave her in detail, all the results that might follow such an operation, and especially the facial paralysis, quoting from Prof. Gross, who states in his Surgery, that removal of the parotid is *always* followed by paralysis of the corresponding side of the face, in consequence of the division of the motor branch of the seventh pair of nerves. She was not to be frightened or deterred from the operation, but at once decided to have it out.

Accordingly, on the morning of the 26th of November last, she was placed upon the operating table, on her sound side, with her head and shoulders elevated. With the assistance of Drs. Bragg and Hudson, she was thoroughly anæsthetized by chloroform, when I proceeded to operate as follows: A single inscision was made in front of the ear extending from near the zygomatic arch to about one inch below the angle of the jaw; after this, the flaps were dissected up the entire length of the incision and the tumor loosened. I accomplished the rest of the operation by pulling and tearing with my fingers, aided with the handle of the knife, using the blade as little as possible. I, in fact, enucleated almost the entire gland by piece meals, beginning at the lower portion of the tumor and separating it upwards, for the reason that, should there be any hemorrhage, I could more easily control it, for there would be but one division of blood-vessels requiring ligation. Fortunately, there was but one small collateral branch of the temporo-maxillary artery divided, which was at once caught up and twisted, and it gave no further trouble. During the operation, I avoided the division of the facial nerve. After the extirpation of the gland, the digastric and stylohyoid muscles, and the external carotid were exposed, leaving but little doubt of the extirpation of the parotid gland. Fearing no further trouble from hemorrhage, the wound was closed with five interrupted sutures, and a few strips of adhesive plaster, after which cold water dressings were applied.

The second day after the operation, at her earnest solicitation, the patient was permitted to leave her bed; on the third day the sutures were removed. The wound healed by first intention.—*Virginia Medical Monthly.*

EXPERIENCE IN PUERPERAL ECLAMPSIA.—*By A. J. Jessup, M.D., of Westtown, New York.*—In my experience of eclampsia in the puerperal state, I have observed the following facts:

1. There has always been albuminuria, or, more strictly speaking, uræmia; although undiscovered, from lack of thoroughness in examination.

2. In a majority, the convulsive seizures occur between the fifth and seventh month of utero-gestation.

3. That a firm fiber with an adipose temperament are the class, *a priori*, in which we would most frequently expect convulsions.

4. When setting in after labor, with complete or nearly complete suppression of urine, death is inevitable.

5. As a nearly exceptionless rule, when labor has declared itself, empty the uterus as soon as practicable, no matter at what period of pregnancy occurring.

6. When there is no declared action of the womb refrain from interference, unless at full term, when, if convulsions persist, empty the uterus.

7. Almost always when occurring prior to full term the life of the fœtus is destroyed; occasionally this happens at full term. These results being due to convulsions or blood-poisoning to the fœtus, or both.

8. When conditions are favorable, extract blood largely.

9. Chloroform must always be an adjuvant to venesection, or when the former is not practicable, give to control the fits; the method will be mentioned further on, when mentioning cases.

10. The use of some free evacuant to bowels, skin and kidneys, is most imperatively demanded, the object being, as far as possible, to unload the blood of the poisonous principles, the elements of the urine.

My object in this report is merely to give the aspects and mode of management of my cases, and not to enter into a pathological history of the disease; to offer them to your readers as my quotum toward the aggregate of experience in this interesting affection.

Case 1.—Mrs. J., reported by Dr. J. H. Thompson, May 28, 1870, in the *Medical and Surgical Reporter* of that date. Patient was my wife; the main peculiarity in treatment was the extraction of blood from the temporal artery, owing to the excessive œdema of the arm concealing the veins, and rendering venesection impossible, together with a concurrent dislocation of the humerus, caused by a fall from her couch during the first convulsion.

Case 2.—Patient was the same lady, aged twenty-eight, at full term, July 13, 1871. Fits occurred at full term, after delivery. Albumen first seen at sixth month; urine was tested daily up to day of confinement, showing increasing proportions of albumen, until it became nearly solid in the test tube; kept up a thorough dietetic, diuretic, and moderately laxative treatment, which, however, did no more than prevent anasacra, and kept up a moderate flow of the urine, without relieving the renal oppression. A consultation was proposed, with the view of bringing on premature delivery, but was objected to by patient; she preferred to assume all risks in the hope of having a living child. Here we cannot too much admire the heroic unselfishness of mothers, who prefer to hazard life itself rather than forego the prospect of maternity and all its hallowed affection, which extends even to the child yet unborn. After a tedious labor of nine hours, tedious from rigidity of the os, was delivered of a still-born child at full term, weighing eight pounds. One-half hour afterward seized with clonic convulsions, affecting chiefly head, face and arms. Pulse feeble, 140; weak; skin cold; countenance purple; there did not seem power in the feeble heart to propel the blood to the surface, therefore venesection was without results. Two medical friends saw her, agreeing that her condition was one of uræmic oppression of the nerve-centers. The slight convulsions were warded off by chloroform, and, indeed, they formed no material element in her danger; she remained semi-comatose during the night, arousing at intervals, taking cold water freely; no urine; bowels would not respond to jalap, elaterium, or two drops of croton oil. On using the catheter obtained about one-half ounce of urine, very dark, of the consistence of molasses; no more secreted while she lived. There seemed no response from the nerve-centers of organic life, to any stimuli employed; pulse, seven hours after first convulsion, was beyond computation; coma complete. The final scene ended fifteen hours after the first fit, and twenty-seven hours after commencement of labor. Toward the end congestion of the lungs was present very markedly.

This mode of death from uræmia is mentioned by Alonzo Clark. Here was a case in which the nerve-centers, brain, medulla, and all the ganglia of organic life were overwhelmed by the blood-poison everywhere present throughout the tissues, supplied by the vitiated fluid, whose deadly effects were observed even on the fœtus in utero, failing, as I believe, to support the life there, on account of its poisonous ingredients. Being insufficient to supply the medulla and par-vagi, they, in their turn, failed to stimulate the heart and lungs, as evidenced by the damming of blood on the right side of the heart, and slowness of the respiratory actions. By the breathing during the last twelve hours of life, it would seem that the par-vagi were insufficient, by its inhibitory function, to keep up normal respiration, the character of the breathing being thus: becoming slower, and at longer intervals until scarcely perceptible, then there would come a deep gasp, then the process repeated as before; as if nature required to be supplemented by the voluntary act in order to re-establish her function, which, when removed, respirations came faint, and fainter, until the vital function seemed almost submerged by the letheal tide, before a voluntary effort would come to temporarily restore the function, until final congestion and insensibility marked impending dissolution.

Another effect of this blood poison is shown in the failure of the sympathetic to respond to cathartic action, the kidneys to diuretic, resulting in engorgement, congestion, inflammation, and final suppression of secretion.

The skin acted profusely, but only by a watery exudation, without smell or color, and valueless as an outlet of poisonous materials.

I have dwelt thus long upon this case, because of the deep personal interest, and also hoping to throw some light upon those physiological and pathological actions of which I have seen no adequate explanations in the writings or teachings on the subject of uræmia, and hoping they may aid in throwing some light on the phenomena of other cases of this disease. I pass on to Case 3, merely hinting that those gentlemen who claim never to have lost a case of eclampsia, who are drawn up in battle array against those who have, should consider that it is their good luck, and hoping that, should the time come when they will meet one of these helpless cases, they may feel more charitable to their more unfortunate brethren.

Puerperal eclampsia; primipara, seven months, æt twenty-two, with delivery by craniotomy. E. T.; called December

31, 1874; of robust physique, in seventh month; being absent, Dr. Whitaker was called, both being present at 3 P.M.; had had four convulsions a few days previously; complained of headache, vertigo and general malaise; with the Doctor's help withdrew twenty-eight ounces from the arm; at 4.30 P.M. a fifth fit occurred; kept her under chloroform until one hour had passed; the sixth fit occurred. The Doctor left; I kept her under anæsthetic nearly continuously for three hours, giving thirty grains potassium bromide every thirty minutes; and half grain morphia, subcutaneously; not repeated; no more convulsions; urine highly albuminous; prescribed inf. dig., with an active purge.

January 1. Pulse 90, temperature 98: had rested well; bowels had acted freely; urine normal in quantity, albuminous.

From this date until January 6th was about the house; on the evening of this date was taken in labor, with some pains until 8th, when they began more actively; on being called, was again absent; Dr. Whitaker saw her; found os would admit two fingers; gave a full dose fl. ext. ergot; left. When I saw her the os was as large as a half-dollar; uterus seemed in a state of tonic contraction, with rigid os. Feeling certain that the ergot was acting badly, and having some anxiety that my patient should do well, having passed through one siege of eclampsia, I regretted the dose having been given; however, it would do no good to lament, so I tried every known method to relax the rigid os without avail. At 2 A.M. the pains continuing severe, without further dilatation, patient becoming exhausted, with a wild look in her eyes, what I most dreaded happened, one of the most severe, long-continued convulsions I ever witnessed; bled to sixteen ounces; chloroform; a second fit occurred in thirty minutes. I kept her fully under chloroform; sent for Dr. Whitaker and Dr. Haynes, who arriving, agreed with me that, as it was unsafe to attempt delivery with forceps, we should proceed to deliver by craniotomy at the earliest possible moment, as we had great reasons to fear a third convulsion like the last. Dr. Whitaker gave the anæsthetic; Dr. Haynes aiding by supporting abdomen, I proceeded to perforate; guarding the lips of the os by the fingers of the left hand, I succeeded in breaking down the cranium and delivering. Uterus contracted well; patient, after some fever and debility, made a good recovery. There was no doubt about the life of the child being extinct; motion had not been felt for more than twenty-four hours past.

I do not remember having heard of a case where craniotomy was required for such a cause. This case required immediate action; delivery must be had without delay, all the medical men present agreeing that the brain could not withstand the pressure of another convulsive seizure.

Case 4.—Puerperal uræmia, with impending eclampsia. A. Mc——, aged twenty-seven; primipara; adipose; plethoric; had always had perfect health; had been suffering with headache, with abdominal pains, referable to region of the stomach, and nausea, for one week previous to my visit. I was called on account of a violent and persistent headache. She described pain "as if caused by a nail being driven over right eye." I tested urine, and found it highly albuminous. While engaged in this, patient called me to the bedside. She sat up, saying that she could see but half of my face, while the supra-orbital pain became so intense as to cause her to cry out with agony. Without losing a moment, I took blood without stint, not caring for measurements. I bled until she fell over on the bed, fainting, in all a large wash-basin nearly full—about three pints. This relieved the intra-cranial pressure, as also the pain and defect of vision. The usual evacuants, with sedatives, were prescribed. At the end of three days I was summoned to attend her in miscarriage, death of the fœtus having taken place, and, of course, the uterus proceeded to expel the foreign substance. This must have been a result of uræmia. This case will also illustrate the necessity of extreme caution in dealing with pregnant primiparæ. We should examine the symptoms with extreme care, to the end that we be enabled to step between the patient and danger or death, and so happily ward off either.

Apropos. Since we have so powerful an agent for relief, when used in proper cases, it would be well to remind those physicians who, in following modern fashions too much, neglect this important therapeutic agent, that in seeking a substitute in chloral, veratrum, aconite, and other deadly agencies, they are handling two-edged swords, which oftener sever the "silver cord" than relieve disease, and would call their attention to the report of a case from the pen of W. H. Parrish, in the *Reporter*, February 23, 1876, Case 3. The treatment there needs no comment.

Case 5.—Mrs. DeG., age twenty-three, primipara, full term, of delicate frame, but healthy; albuminuria; venesection, twelve ounces. In this case chloroform controlled fits easily (as indeed it did in all my cases subsequent to venesection). Labor set in three days after, with the birth of a healthy child.

I will conclude with a description of the method which I have found most useful in administering chloroform.

The fits generally recur at exactly equal intervals. For instance, if the first two are fifteen minutes apart, they will continue to recur at the end of each fifteen minutes; if half-hour apart, one hour, and so on, unless the order of succession is broken by your efforts to subdue, or some change takes place in the phase of the attack. The practical application of this observation will be appreciated when giving chloroform; it would be unwise to keep a patient under chloroform from hour to hour, so my plan is to watch the clock, and when the time approaches when we may certainly expect a convulsion, I bring the patient fully under, keep her so until the time is past, then discontinue until the next, and so on, when, after four or five hours of such treatment, your patient will be secured for a considerable time, say twenty-four or forty-eight hours, from a recurrence of the fits; generally the period of immunity persists until the onset of labor. There is one little caution needed. We will suppose you have controlled three fits; in doing so you have broken the order of their regularity. You then relax your vigilance, and are surprised by a fourth.

Now, to make sure that there shall be but one fit after I pursue the method as above, with the further watchfulness of commencing the anæsthetic at the slightest signs of restlessness, staring, etc., which signs are generally the premonitions of a convulsion. Adjuvants, as mentioned above, will carry your patient on until labor supervenes. If it has set in, the uterus must be emptied as soon as practicable.—*Medical and Surgical Reporter.*

REMARKS ON THE BEST METHODS OF PROMOTING POST-PARTUM UTERINE CONTRACTIONS.—*By George B. Fundenberg, M.D., Cumberland, Md.*—Expression of the placenta was first recommended by Crede, and other German writers, who taught that the placenta should never be removed by traction upon the cord, but by seizing the uterus through the abdominal walls and squeezing out its contents. This was certainly a step in advance, and Playfair made another, even more important, move in the right direction, when he insisted that, "in every labor, however normal, the practitioner should never remove his hand from the uterus after the birth of the child, until the placenta is expelled," and that he should "keep up continuous uterine contraction 'for at least half an hour after delivery; not necessarly by friction on the fundus, but by simply grasping the womb with the palm of the hand, and thus preventing undue relaxation." He also recommends the administration of ergot twenty minutes before and twenty minutes after delivery.

Playfair insists upon the extreme value of this proceeding in the prevention of post-partum hemorrhrge. In addition to this, I wish to call your attention to the many other advantages of this method, and especially to its value in the prevention of that form of septicæmia which arises from auto-infection. And as septicæmia is more frequent than dangerous post-partum hemorrhage, and more to be dreaded, because less under control, it becomes a question of prime importance whether the claim here made for this method of prevention can be sustained at the bedside. And as prevention is better than cure, any method that in a marked degree tends to prevent post-partum septic infection, must be hailed as an important advance in this department. If in addition to this, it will at the same time rescue the patient from the dangers of post-partum hemorrhage, while it nearly annihilates the after pains, and signally promotes uterine involution, its value must be greatly enhanced. It will be evident that the prophylactic value of this method will be most exhibited in those cases which arise from the retention of putrid material formed in the uterus and genital passages; but a firm contraction of the womb, and the consequent emptying of the vagina, may play an important part in the prevention of septic poisoning derived from without. Billroth lays it down as a law, that recent granulating wounds covered with pus cannot absorb. But is the placental disk from which the placenta has been recently separated, a wound? It certainly does not granulate, nor can the discharge from it be considered pus. It presents, however, when the uterus is relaxed, an open surface with numerous gaping sinuses, ready to imbibe whatever may be presented to their mouths, and this imbibition may be favored by the alternate relaxation and incomplete contraction of the uterus. Is it unreasonable to suppose that there may be a suction exercised by these sinuses under these circumstances? At least, it is certain that the laws which govern the diffusion of fluids must obtain here as elsewhere.

In the relaxed condition of the uterus and vagina after parturition, filled as they are with retained coagula and the detritus of broken down tissue, air is readily admitted, and putrefaction advances, by contiguity, from the external coagula to those more deeply seated. The temperature of the body, under these circumstances, favors rapid putrefactive changes, so that during the seventy-two hours succeeding delivery, enough of septic poison may be introduced into the system to produce the most deplorable results. Is it not possible, also, that under these circumstances, with coagula blocking up the os uteri and vagina, an inefficient contraction, and especially a partial one, may actually inject septic poison into the maternal sinuses? Whatever may be thought of these suggestions, every practitioner will recognize the value of that method which most certainly insures an enduring tonic contraction of the womb.

When we compare at the bedside the results following the old method, and the one I have been advocating, I believe every physician who has tried both will not hesitate long in delivering his verdict. How often do we witness cases in which, under the usual method of treatment, the placenta is without delay removed by traction, followed by the immediate application of the binder, and this succeeded by the administration of an opiate, which, if it have any other effect than annulling the perception of pain, most probably increases and makes more enduring the uterine relaxation. In many of these cases the after pains are more dreaded than those of labor, and the poor woman is worried and exhausted by ever recurring pains, until in many cases a state of uterine irritation is induced, bordering closely on inflammation, and occasionally terminating in it. How often have we seen patients treated in this manner discharging coagula even at the end of third week. It is easy to know how slowly and imperfectly involution must take place here, and how surely hyperplasia and displacement must occur. How different is the result when the placenta is carefully and leisurely expressed, the womb held in the grasp of the hand, and a tonic contraction insured, and when ergot given at the proper time comes in to take the place of the hand, and holds the uterus in its unrelaxing grasp. For that ergot establishes and keeps up a tonic contraction cannot be doubted. When a good preparation is given, in sufficient doses and at proper time, it rarely disappoints our expectations. When so timed that its full effect is obtained in half an hour after delivery, that is, as soon as the uterus is freed from the grasp of the hand, the full value of the method is illustrated. I do not wish to be understood as maintaining that this method will, in every case, produce these results, but that the cases are very few in which it fails; and even in these, in which the tendency to relaxation is unusually strong, the repeated use of ergot every four cr six hours will give entirely satisfactory results. It is as a promoter of uterine condensation after parturition that ergot finds its most important therapeutical application. A short time ago I was called to a lady in her eighth confinement, in the last six of which I have been her attendant. This lady has been unusually subject to post-partum hemorrhages, and to severe and continued after pains, with all the unpleasant effects that follow. In her two previous accouchements she nearly lost her life by these floodings, and in the one previous to the last, I only succeeded in causing uterine contraction by introducing a piece of ice into the womb. In her late confinement I adopted the method recommended above, by the careful expression of the placenta, keeping the uterus in the grasp of the hand for thirty minutes, and the use of ergot before and after delivery, and although there was a rapid gush immediately after the delivery, the bleeding was easily controlled. The after pains were remarkably modified, and her recovery was unusually rapid; so much so, that she repeatedly inquired what could be the cause of such a difference between this and her former labors. And let it be remembered that this signal change occurred in the eighth pregnancy, when, other things being equal, the inertia of the womb should have been greater. I could cite a number of other cases equally significant, but, "*ex uno disce omnes,*" they all teach the same lesson.

The ulterior results of insufficient uterine contraction are numerous. To this, in the large majority of cases, must be ascribed the hyperplasia, the menorrhagias, the leucorrheas, the displacements, and the other innumerable ills that follow in their wake, and that give such constant employment to the gynæcologist, and which so often constitute the opprobia of the profession.—*Med. and Surg. Reporter.*

A CASE OF TRAUMATIC TETANUS IN A YOUNG CHILD, WITH TREATMENT AND RECOVERY.—*By H. N. Burr, M.D., of Wolworth, N. J.* The following case is one of unusual interest to the profession, and for that reason I think it important that it should be published, for their benefit. The statement I think is entirely novel, and under unfavorable results might be severely criticised by some of the profession. I was called on the morning of October 8, 1873, to see Charles Laurence, a bright, active little boy, aged two years and nine months, who had been well up to this time, with the exception of occasional attacks of spasmodic croup, which had never continued but a short time. During the night of the seventh, he had been taken with a high fever and great restlessness; there was a jerking of the arms and legs, and also of the muscles of the body; and when asleep would start up with a jump and moan, as if in pain. When moved during the night it gave him pain; the head was hot, red, swollen, and tender to touch. A scar on the forehead had taken on a red and angry appearance, and radiating from it in different directions were deep red lines, which passed to the top of the forehead, and were lost in the hair; to account for the scar, I was told he had been bitten by the house dog eight days before, while he was teasing him; it bled profusely, but healed readily, leaving a scar that continued to look red up to this time. His condition when I saw him, on the morning of the 8th, was as follows: High fever, with the surface hot and dry; very nervous and irritable, and complains of being hurt when he is moved, as though the muscles were sore. He starts up with a cry every few minutes; the head is hot, with the part about the scar red and swollen. When he is moved he acts as if his back was stiff and sore. His breathing short and quick; the pulse full and very rapid, as much as 150, and even more, to the minute. There was a jerking of the muscles of the face, and of the arms and legs. When undisturbed for a few moments he would be quiet, and then start up with a jump that would raise him from his bed or his mother's lap. His eyes were bright, with the pupils about natural; he kept them closed unless he was disturbed. The temperature, I regret very much not to have taken, as in the study of the case I find it quite an important feature; some time during the night his mother had given him a dose of castor oil, which had not operated when I saw him. I ordered an injection of warm water to assist its action. I prescribed tincture of aconite root, in drop doses every hour, to reduce the pulse and subdue the dry hot surface, and

℞—Pulv. doveri., ... grs.iij
Potass. nitrat., ... grs.ij.

every three hours, with a cloth wet in cold water to his head.

On leaving him, I gave his parents to understannd that something serious would probably supervene. I saw him about eight in the morning. The injection was given, and his bowels moved freely, from its effects. At dinner he asked for soup, of which he ate some, but did not retain it but a short time, when it was vomited. Soon after this he became convulsed with a spasm of the arms and legs, and the whole body became stiff, and he sank into a deep sleep, from which he could not be aroused. He was, by his parents, put into a warm bath, which relaxed the muscles a little. His jaws were set and could not get him to swallow the least thing. When they found their efforts were of no avail, I was sent for, and saw him not far from 1 P. M. I found him lying in his crib, breathing with a slow and labored effort, with a rattle in his throat. In trying to get some liquid in his mouth I found the jaws were set, and after prying them open no effort would be made to swallow. The legs and arms were stiff, the hands were closed. Pulse full, strong, and bounding, the skin very hot but moist; the eyes were closed, but when opened the pupils were dilated very wide and sensitive to the light. His head was hot and the scar very red. Judging, from his breathing, and the rattle in his throat, that death was fast approaching, I concluded nothing could be done for him, and that he must die.

After a few moments reflection I thought of using cold water showered on his head. This was done to relieve the anxiety of his parents, and to have the appearance of doing something. I first gave him an injection of warm salt and warter, with turpentine, to divert the blood from the head. I then took him out of the crib, with his vital powers sinking, and commenced to pour cold water on his head. This I felt was my only hope, as he was unable to swallow the least thing, and there was the rattle which I had heard in several instsnces where patients had died from apoplexy. His head was held over a pail, and with a pitcher that would hold a quart I commenced pouring cold water, right from the well, in a small stream on the back of his head, letting it fall more than one foot. This was continued for three hours, with an occasional intermission of a few minutes at a time, when he sank into an easy slumber, and in a short time awoke, and was in his right mind. In connection with the cold water we used mustard to the back of the neck and soles of the feet. During the first half-hour there was but very little change in his condition, the water not seeming to be noticed. At the end of that time there was a change in his breathing, which became easier and more natural. The rattling had entirely subsided, which showed there was relief to the pneumogastric nerve. This change was apparent to all who observed him, but it was the only change until three-quarters of an hour had passed, when he moaned and opened his eyes for the first time. The eyes were dilated and extremely sensitive to the light. Soon after his breathing improved and he moaned, the rigidity of his muscles gave way, and we could get his mouth open sufficient to introduce anything into his mouth. The effort to swallow was terrible, and gave me the impression that he was choking. He would open his eyes, which were glaring and glassy, and raise himself almost from the pillow in his struggle to swallow, and I did not give more than half a teaspoonful at a time. I did not persist in giving him medicine by the mouth until I had used more water. If left for a few minutes without the water being poured on his head, he would sink away into the deep sleep, from which nothing would arouse him but the cold water poured on his head. As soon as I thought it safe to do so, I gave him a dose of morph. sulph., $\frac{1}{16}$ gr.; camph. pulv., 2 grs.; this I gave to get the effect of the morphine in contracting the pupil. At times he would moan, and cry out, and try to move, but took no notice of any one or anything, except the cold water, and not even that until it had been continued for some time without interruption, except long enough to replenish the pitcher. During the first hour there was not much improvement, except in the breathing and muscular relaxation, and during this time the water had been faithfully applied. A larger pitcher was now procured, and its contents could be poured in a small stream entirely on his head with no expression from him except to moan when the pitcher was nearly empty. The pitcher would be again filled and continued until he would come partially to his senses, when we could see by his actions that the intense cold was distressing him, when we would stop until he sank again to sleep. In an hour and a half I gave him another dose of the morphia and camphor, as the pupils were very largely dilated. It was about 4 P. M., when he sank into his natural sleep, and about five awoke, and knew his parents and all about him. I gave him $\frac{1}{16}$ grain morphia every four hours, to keep him quiet, and drop doses of the aconite as often as every hour, if it was required, to keep the fever down and also to keep him perspiring freely, and in case his skin became hot and dry to increase the amount. Bromide of potassium, five grains every two hours, to allay the jerking of the muscles of the arms and legs. He passed a quiet night, with some flashes of fever and jerking of the muscles.

9th. Saw him this morning, and found the pupils were not so largely dilated as yesterday; pulse not so strong nor so frequent, and not much fever. There is some jerking of the muscles, and starting up in his sleep, with a sharp irritable cry; also complains of its hurting his back when moved. The scalp swollen and red, with the angry look about the scar.

The urine is not high-colored. I had the scar painted with a solution of veratrum viride and glycerine. Ordered mustard to the back and feet, and continued the morphia and camphor, bromide potassium and aconite, renewing my instructions to keep him moist.

10th. This morning he is very much improved from yesterday, being bright and cheerful, with some of the nerve symptoms present, while the jerking was all gone. I continued all medicines except the bromide of potassium. I saw him again on the 11th, and could see no signs of the fearful disease about him, while the swelling and redness about the scalp had subsided and the scar had a more healthy look.

He continued well until the 30th, when his father called on me and said the boy was not so well as he had been, but was extremely nervous and irritable, with jerkings of the arms and legs, and jumping when he went to sleep. He was very much afraid the convulsions would return. The scar where he had been bitten was red and swollen, with some streaks running from it, and his head was hot. I gave him morphine and bromide of potassium, and ordered cold water to his head Under the use of these medicines his symptoms subsided, and in a day or two he was well. There were a number of times during the year when he would get very nervous and irritable, but at no time did he ever have spasms. The boy is now living, a bright, active little fellow. The dog was killed a few weeks after, but was not rabid; it having been growing cross toward the little boy for two or three weeks before he was bitten. Had the boy died, most people would have said it was from hydrophobia, but since he got well, that cannot be, and I must conclude I had a case of tetanus. I think now, but for the persistent use of the cold water he would have died, and I may attribute my success in this case to its use.—*Hospital Reports.*

Reports of Societies.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, April 12, 1877.

The President, Dr. H. Lennox Hodge, in the chair.

Intracapsular fracture of femur—Thrombosis of left femoral vein extending to vena cava. By Dr. J. C. Wilson.

The specimen was removed from the body of a gentleman aged sixty-seven, who weighed one hundred and sixty-seven pounds. He fell upon the sidewalk, January 24, and received the full force of the blow upon his left hip. Shortly afterward he was etherized and examined by Dr. Wilson and Dr. J. H. Brinton.

The foot was markedly everted; there was a shortening of the limb of apparently one-half the arc described by the great trochanter in rotation, seemed to be of shorter radius than that of the opposite side; after free movement, crepitus was felt; it was, however, obscure.

A diagnosis of fracture (intracapsular ?) of the neck of the femur was made.

The treatment selected was weight-and-pulley extension, and counter-extension by elevating the foot of the bed. Sand-bags were employed.

Four days afterwards; signs of pelvic cellulitis supervened. These shortly subsided. February 12, the leg became swollen, tense; there was occlusion of the femoral veins, and inflammatory infiltration of the tissues in the line of the great vessels. Fever set in, the temperature rose to 102° Fahr., and remained between 98¼° and 102° until he died, March 26. A bedsore had formed over the sacrum. The urine was not albuminous. Liver dulness was enlarged. There were no pulmonary symptoms. Heart-sounds feeble; the first valvular. The pulse feeble; no murmur.

The *post-mortem* examination, made twenty-six hours after death, confirmed the diagnosis of intracapsular fracture. In addition, the heart was found fatty, the lungs slightly adherent but otherwise normal; the liver fatty, and the kidneys cirrhotic. There were evidences of inflammation on the inside of the pelvis opposite the acetabulum, thrombosis of the left femoral and iliac veins extending to the vena cava, as shown in the specimen, with inflammatory infiltration of the tissues surrounding these vessels.

Dr. C. B. Nancrede said that this case of thrombosis of the iliac vein was interesting in connection with the paper he read before the Society a year ago, furnishing an illustration of what he then tried to prove. Here is an injury, a blow over the region of the trochanter major. We know that even a slight blow will produce clotting in the smaller veins, and inflammatory action will be set up by these—the venous clots—in the surrounding tissues. In the venous clot we have present one of the factors necessary for the formation of a clot, viz: the fibrino-plastin, in the shape of the blood-cells. Now let blood containing an excess of the second necessary factor—namely, *fibrinogen*—resulting from the retrograde metamorphosis of tissues, etc., reach the performed clot containing the fibrino-plastin, and it will go on extending until no more blood running from the inflamed spot can reach it. In the case before the Society that point should be about the brim of the pelvis, since normally all the blood from the injured territory would be emptied into the femoral below this point.

Upon examining the specimen, however, we find that it extends still higher? In one of two ways: either blood containing retrograde matter was conveyed from the acetabulum through the pelvic bones, and thus was poured into the external iliac through the internal iliac vein, or, what is still more probable, the clot, irritating the tissues at the brim of the pelvis, owing to the greater pressure due to the sub-jacent bone, established a new depot for the absorption of inflammatory products, and thus extended the clotting until all the venous blood-supply was prevented from reaching the thrombosed vein from the inflamed extremity. This second inflammatory depot is not assumed for the purpose of explanation, but is specially noted by Dr. Wilson in his remarks.

Dr. Hodge said the specimen was interesting from several points of view. First, the fact of embolism being present was of great interest as regards the origin of the clot. A slight cause will produce a clot when least expected. He recalled a case which occurred at the Presbyterian Hospital, in which a leg had been amputated by Dr. T. B. Reed, on account of disease of the ankle-joint. When the patient had almost recovered, and the wound was nearly healed, the opposite thigh became very much swollen and tender over the femoral vein, and there was every reason to suppose a clot had formed in it. This condition presented itself immediately after the man was first lifted from his bed. He recovered.

Another point of interest was in reference to the formation of bony nodules in the capsule around the joint. They do not occur uniformly, and their explanation is more or less difficult. He thought the most reasonable explanation attributed them to fragments of periosteum displaced at the time of fracture, just as the periosteum produces bone after transplantation.

Another point of interest is the apparent injury to the inner surface of the pelvis opposite the acetabulum. He thought this could be accounted for in two different ways. It was possibly due to the direct effects of the original injury, as the acetabulum may be broken by the head of the femur driven forcibly against it. Or this condition may arise from inflammatory action causing softening of the bone.

Still another point, Dr. H. thought, was that, notwithstanding the absence of callus, which is characteristic of injuries in this locality, a great degree of firmness exists. Whether this is due to an attempt at union, or whether this is one of those rare cases of partial fracture of the neck of the femur, can only be determined by sawing the bone.

A final point of interest, he thought, was the preservation of the round ligament, which, from its direction, as the members of the Society may notice, bears out the inference that one of its uses is to aid in the support of the body by bearing a portion of its weight in the erect position.

Dr. Wilson said that the crepitus, the limitation of the arc of a circle described by the trochanter major, together with the shortening, led them to believe the fracture was a complete one.

Dr. Nancrede thought that there was no evidence of any union. The limb had never been stepped upon, and therefore there was none of the ordinary displacement usually seen, and the apparent union was only the result of the interlocking of the fragments.

He thought that if he had taken a few more steps there would have been no doubt about the presence of a complete fracture. Repair was impossible with such interruption to the circulation as existed. The edges of the fragments were as sharp as if broken but yesterday, and, as is well known, the first step towards union should be a proliferation of the connective-tissue cells or the adventitia of the Haversian vessels. This would induce absorption of the earthy matter of the bone, and rounding of the edges of the fragments would ensue.

A Needle Found post-mortem within the Cranium.—By Dr. H. Lenox Hodge.—Upon removing the calvaria of a subject in the anatomical rooms of the University of Pennsylvania, a sewing needle of medium size was found lying on the right hemisphere of the brain, nearly parallel to the superior longitudinal sinus, about an inch distant from it, and about an inch and a half behind the fronto-parietal suture. The point and the eye of the needle were both unbroken. The point was directed backwards. The needle was much oxidized, and attached to the arachnoid surface of the dura mater, by old bands of lymph near the larger extremity of the needle.

No history of the cadaver, an adult male, could be obtained.

The needle appears to have given rise to no important changes, and had no apparent connection with the cause of death. The man seems to have died of phthisis.

It is a matter of interest how the needle reached this position. Other methods might be suggested, but it is most probable that it entered the anterior fontanelle during infancy, and thus passed to the place where it was found.

Dr. Hamilton Osgood asked what was the appearance of the needle.

Dr. Hodge replied that it was black and tarnished.

Dr. Sinkler thought it most likely that it had entered the fontanelle during infancy, as by no muscular contraction could it obtain the position in which it was found.

Dr. F. P. Henry said his experience went to show that instead of corrosion of needles long buried in animal tissue, there was an actual addition of new material. A short time ago he had removed with great difficulty a needle from the biceps muscle of a girl. It was three times the thickness of an ordinary needle, very rough and uneven, and covered with a hard, mineral-like depost, to which was owing the increase in thickness.

Dr. Wilson recited the case of a sewing-girl who was said to have swallowed a paper of needles, many of which were removed from different parts of the body. These were all smooth, but blackened and tarnished. He had recently removed from the foot of a boy a needle which had been imbedded for four months. It was simply tarnished.

Dr. Sinkler had removed a needle from a foot after it had been there imbedded for three months. It was smooth and blackened, but not corroded. He placed it in his pocket-book, and on examining it after a few weeks he observed that the rusting process had taken place.

Dr. Richard A. Clemann said that he had made use of the fact that a needle, after being imbedded in tissue for a certain length of time, becomes tarnished. He had extracted a fragment of needle and was anxious to determine whether it was all that had entered the foot. The broken end was tarnished. He fractured the needle, and observing that the fractured ends presented the usual steel-like luster, he concluded that he had removed the whole fragment. Had he broken it off the fractured end of the removed portion would have been bright.

Gangrene of the Epiglottis.—By Dr. Carl Seiler.—The patient, a man presented himself at the infirmary of the German Hospital. Nearly one-half of the larynx had sloughed off in two weeks. The odor was so horrible that a laryngoscopic examination was almost impossible. The man was recommended to go to a general hospital, and has not been heard of since.—*Medical Times.*

ST. LOUIS MEDICAL SOCIETY.

April 28th, 1877.

The President, Dr. Scott, called the Society to order.

Dr. Kennard reported the following case: A negro, aged about 32, occupation of waiter, of temperate habits, complained of indisposition the day before he came under observation. He seemed to be under the influence of an opiate, but it was learned that no drug had been taken. He was conscious, but could neither move nor speak. Pulse 72; the skin cool and moist; the pupils responded. He seemed to suffer from pain in the throat. External applications were ordered to the throat, and quinine and purgatives given internally. On inquiry it was learned that he suffered from a similar attack about a year ago.

Biliary Calculi.—Dr. Newman reported the case.

Last fall was requested to see a gentleman who suffered from pulmonary hemorrhage. The family history was bad, and as winter was approaching he was sent to the South, and the patient spent the winter in Texas.

He reported improvement until about three weeks before his departure for home, when he was seized with pain in the right side and pit of the stomach. Several physicians were consulted, one of whom diagnosed hydatids of the liver. He returned home, and was seen shortly afterwards when he was suffering from another attack (there was an intermission between the attacks); besides the pain there was considerable jaundice. The stools were ordered preserved, but by some mistake they were not seen. Several days afterwards a recurrence took place, and in the preserved stool a calculus was found; subsequently others were detected. His general condition was very precarious. He was put upon alkalies, and in a few days he passed large quantities of broken up calculi. Was not prepared to say whether the treatment effected this or not.

In answer to a question from Dr. Bryson, as to what salts of potassium he had employed, and their doses, Dr. Newman said he had given potass. carbon. in grs. x, and potass. acet. in grs. xx doses, together with bismuth and pepsin. The last two drugs were administered with a view to ameliorate the condition of his bowels and stomach, for everything which passed his bowels seemed undigested. The patient has had no attack since three weeks, and for the last two weeks he had passed no debris.

May 5th, 1877.

In the absence of the President, the Vice-President, Dr. Briggs called the Society to order.

Dr. Hodgen reported three cases of aneurism. (Published in the June number of this journal.) After reading the histories of the cases, he remarked that a difference of opinion had existed among the gentlemen who examined the third case reported, that of aneurism of the ascending portion of the arch of the aorta; some considered it an aneurism, others, amongst these himself, had diagnosed malignant enchondroma of the first rib.

Dr. Prewitt said that he had examined the case, and from the elasticity of the tumor, the impulse felt, and the marked emphasis of the heart sounds, he had diagnosed aneurism of the innominata.

Dr. Glasgow: When I first saw the case there was a fluctuating, elastic tumor, dull on percussion, and situated under the sternal end of the clavicle and first rib. Two sounds were discovered in it; later a weak bruit with the first sound and a second sound, both synchronous with the heart sounds, but more intense, were heard. There was no difference in the pulsation of the carotids; towards the end a difference in the radial pulse was observed. The larynx was congested, causing huskiness of the voice.

In answer to the question as to how he explained the origin of the sounds in the sac, he said: The sounds are heard in all aneurisms; they are produced by regurgitation in the sac.

After the recess which the Society took to enable the gentlemen to examine the specimens, Dr. Hodgen remarked that during the intermission the question had been put to him why he considered this case to be one of malignant enchondroma. In answer he said:

Within a short time I had seen two cases of malignant enchondroma, involving the sternum and costal cartilages; the specimen from one I exibited to the Society some months ago, the other is yet under observation. Now we are a little apt to run in grooves. I had not yet gotten out of the enchondroma groove. This, of course, left my mind in a favorable condition to look for and find a tumor of that character. The original site of the tumor, almost directly opposite the cartilage of the first rib, led me to differentiate between a disease of that rib and an aneurism of the innominata artery.

I did not find the radial pulse of the right side behind that of the left, nor did I uniformly find the right radial pulse less full and strong than the left; and, I reasoned, if this be an aneurism of the innominata, the pulse would be full and the flow retarded. The first and second sounds of the heart were more distinctly heard at the tumor than directly over the heart, which was explained by assuming a bettor conductor than the blood in the aorta and aneurismal sac. The growth of the tumor was most rapid in the direction of the sternum and ribs, where there would have been most resistance to the pressure of an aneurism, and the growth was least rapid above the clavicle, where the loose connective tissue would offer little resistance. The clavicle, sternum, and ribs were involved in the tumor, and to the touch seemed thickened as they approached the softer and more prominent points, and at the extreme margin of the bones the thin and easily yielding parts of bone could be felt to break down under pressure.

Besides, there were hard points scattered throughout the tumor, which indicated a malignant growth rather than an aneurism. The recurrent laryngeal nerve gave no evidence of disturbance through disturbance of the movement of the vocal cords. At several points about the margin of the tumor the minute vessels of the skin were dilated, as though the extreme vascular condition of the tumor was involved in the skin itself. Little of the severe pain that ordinarily results from pressure of an aneurism of the innominata on the axillary plexus was present. No damming back of the venous blood, as would have resulted from the pressure of an aneurism of the innominata on the veins returning the blood from the subclavian veins, was observed.

Though in error in my diagnosis, yet there were several reasons for the opinion given, although they were all fallacious. The symptoms of aneurism, as present in this case, were only such as are present in tumors not aneurismal. The site, though that most frequent in aneurisms, is one that admits of the presence of other tumors. The pulsation is found in many tumors not aneurismal; the lateral enlargement on cardiac contraction is not peculiar to aneurisms, and finally the refilling after pressure had reduced the size of the tumor, also exists in vascular malignant tumors of bone.

While I could not, if I desired, recall my error, I cannot believe, even after a post-mortem has shown how worthless my reasons are in this case, that they are quite as valuable as any that can be presented for the opinion in the earlier stage of the disease, that it was an aneurism. Some will recall a case in which age, tumor, pulsation, expansion, thrill and murmur, all existed from hydræmia.

Dr. Kennard said that hydræmia is often mistaken for aneurism. A lady came under observation who was extremely emaciated, and from the symptoms observed, aneurism of the abdominal aorta was suspected. The patient was treated for ulcers of the stomach, from which she suffered, and made a complete recovery.

May 12th, 1877.

Deformed Fœtus.—Dr. Youngblood exhibited a fœtal monstrosity about four months old. The deformity consisted rather in the absence of parts than in a peculiar development. The fœtus is armless, the femurs are absent, the knees are attached to the pelvis, there are but three toes on each foot.

Dr. Hodgen presented two specimens of cancer, one of the penis and the other of the stomach; as also a specimen illustrating follicular degeneration of the large intestine. The case of cancer of the penis was Dr. Johnston's patient, who gave the following history: About ten weeks ago the patient noticed a slight discharge from his penis, as also a small growth at the frenum. He consulted a physician, who treated him for syphilis. The growth enlarged until the whole penis and part of the scrotum was involved. There was no glandular enlargement. The penis was amputated, and the patient is now under treatment.

The second case—that of carcinoma of the stomach—was seen but once before death. The patient was between fifty-five and sixty years of age, very much emaciated, and was unable to retain anything on the stomach unless it was very slowly swallowed. The food seemed to accumulate in the œsophagus, and though retained there for a short time, was afterwards vomited. A partial autopsy was allowed. There was great thickening at the cardiac and pyloric ends of the stomach. The peritoneum and intestines were studded with cancerous deposits. The omentum was very much contracted, the kidneys and liver were normal.

Case third.—The patient had suffered for a number of years from dysentery, but had kept up strength pretty well. About five months ago she was again attacked with dysentery; a large quantity of mucous and blood was discharged; there was great tenesmus. A tumor appeared in the left iliac region, apparently six or eight inches in length; it varied in size and position. Intussusception of the sigmoid flexure was suspected. At the post-mortem no trace of peritonitis was discovered, except on the brim of the pelvis on the right side. An abscess had formerly occupied the ventes ilii. There were old adhesions between the colon and the margin of the pelvis. The piece of intestine shown had its follicles very much enlarged, and the mucous and sub-mucous tissues partly destroyed.

Poisoning by the Self-inhalation of Chloroform.—Dr. Briggs reported the case, and remarked that the habit of inhaling chloroform is prevalent amongst females to an alarming extent. Dr. Boislinere made some remarks at length on the unauthorized sale of chloroform and other dangerous drugs by apothecaries.

May 19, 1877.

The Society met as usual, the Vice-President, Dr. Briggs, presiding.

Diphtheritic Membrane.—Dr. Mudd presented a complete cast of the larynx and bronchial tubes as far as the third division which was expelled through the opening made in the trachea during tracheotomy. He gave this account of the case: The patient, a girl, nine years of age, had taken a cold and suffered considerably from coryza. Two days previous to her coming under the observation of Dr. Mudd, the attending physician, had observed diptheritic patches. An examination revealed considerable laryngeal obstruction and laborious breathing; the patient was comatose; mucous rales; no vesicular murmur. Tracheotomy was decided upon, and during the operation, when the rounded end of a hair pin was inserted to widen the opening for the introduction of the tube, the membrane shown was ejected. Next morning the child breathed easier, the lungs were clear, and the general condition was improved and continued to improve until the fourth day, when the patient died from uræmic convulsions. A brother of the child and her parents suffered from diphtheria; albumen found in their urine; they recovered. The treatment in all cases consisted of inhalations; the temperature kept at 80—85 and moist, and the administration of iron and quinine internally. The glands were enlarged in the other patients, but not in the girl.

Dr. Wm. Porter thought that the membrane had been loosened before the operation, for it is well known that the vapor from slacked lime or steam softens the membrane, that it thus becomes loosened and obstructs the trachea. The fact that the child died after the removal of the membrane, proves that the disease was true diphtheria; had it been membranous croup, recovery would probably have taken place.

Dr. A. Green—Two weeks ago I was called to see a child about two years of age, sick with croup. On examining the child I found the soft palate, the uvula, tonsils and posterior wall of the pharynx as far as I could see, covered with that peculiar kind of exudation, the so-called diphtheritic. As the false membrane extended into the larynx and trachea also, as was plainly seen by the dangerous symptoms peculiar to membranous croup, so this was the case of croup with diphtheria, a croup of the larynx and trachea as well as a croup of the pharynx, the so-called diphtheritis. But which was the primary affection? It is clear that it was either a case of primary croup of the larynx extending into the pharynx, or a primary case of dyphtheritis extending into the larynx. Having had in the last few months several cases of diphtheria, among adults and children, a few of them true diphtheritis, and none at this time of real croup under treatment, I decided that it was a primary case of diphtheria which extended into the larynx and became there a case of membranous croup. The interesting part of this case is, that it serves to illustrate a pathologico-anatomical fact, namely, that one and the same pathological process may become modified by the part upon which the morbid process is located.

The false membrane of the larynx was thrown off spontaneously without the administration of an emetic, the diphtheritic membrane—a name misapplied, because, in true diphtheria the so called membrane is the necrosed sub-epithelial connective tissue, respectively the whole mucosa with excessive infiltration of cells and low organisms, which can undergo no other change but putrefaction and decomposition. It remained there for days, and some isolated spots especially, on the right tonsil, nearly from twelve to thirteen days, before it disappeared. Again, the false membrane in the larynx was formed anew as soon as thrown off, for several nights in succession—the whole croupous process in the larynx was entirely over in about the fifteenth day of the disase—on the contrary, on those parts of the posterior wall of the parynx and fauces which cleared up the so called diphtheritic membrane did not reappear, but the parts remained clean.

After the croupous process with its threatening suffocation was entirely over, the posterior nares were lined for a few nights in succession, with a false membrane which annoyed the child much, and after snuffing, coughing, and exertions of the child to breath through the nose, it loosened and was thrown off to reappear next night.

I will only call attention here to the histological fact, that only that part of the posterior wall of the pharynx which lies opposite the nose, bears a ciliated epithelium, and consequently the morbid process behaved like croup and not like in the other parts of the pharynx which are covered by a laminated pavement epithelium.

As I considered the case to be one of a primary diphtheritic process, I abstained from topical applications for the following reasons: the so-called diphtheritis, may be only a croupous process, that is a superficial one, only a little modified by the parts affected, or a true diphtheritic process; necrosis of the whole mucosa with consequent loss of substance, or one between the two. In the first case, the diphtheritic or rather croupous membrane, if left alone will be thrown off spontaneously, and will not be reproduced in the same place, whereas if removed by force so that the part bleeds it will be reproduced on the same place, in the latter, although the necrosed part is surrounded by a sharp line of demarkation. If it be connected with the living tissue by connective tissue fibres, nerves, bloodvessels and elastic fibres, which stretch over like bridges from the living to the dead part, these bridges must first be separated by a reactive inflammation with suppuration, before the slough can become separated. If topical applications, I mean those severe mechanical ones, as the probang or solid nitrate of silver, etc., to loosen and remove these sloughs, are used, we may favor the absorption of septic matter, by destroying the granulations, the protective wall against absorption, and produce septicæmia, which is the causa mortis of most of those that die from diphtheria. I will add here that the child got entirely well.

Resection of the Knee Joint.—Dr. Gregory showed portions of bone removed during resection of the knee joint. The patient was 20 years of age; no history of injury; the disease had run the usual course of white swelling for eight months. The operation consisted in making a long horseshoe shaped anterior flap, then about an inch and a half of the lower end of the femur and the patella, and subsequently three more layers of bone were removed. When the last piece was taken away a sequestrum three inches long was discovered in the canal of the femur, evidently the result of central necrosis. After taking a layer from the tibia the bones were adjusted and a McEntire splint applied. The limb is three inches shorter than the other. Patient is doing well.

Dr. Spencer read a paper on amyl nitrite in diseases of the ear. Published in the June number of this journal.

At this meeting of the Society, the report of the committee which had been appointed at a previous meeting to consider the feasibility of employing a stenographer to report the proceedings of the Society, was adopted and, on the recommendation of the committee, Dr. R. M. Funkhouser was engaged to fill this office.—*Hospital Reports.*

Editorial.

TO OUR CONTRIBUTORS.

The most important and useful feature of medical journals is the record of cases and the plans of treatment adopted throughout the country, in the various forms of disease that occur. The busy practitioner often neglects to report such as would add greatly to the cause of science, for want of leisure to do so in a manner satisfactory to himself; and thus valuable facts are lost to the profession. Short communications containing a single, though important fact, are considered unworthy of publication, and thus useful truths are only treasured in the mind for the discoverer's especial benefit.

In this way journalists fail to afford that which is most important to their readers. Lengthy theoretical articles, it is true, are read and enjoyed by many members of the profession, and we are always pleased to publish the results of scientific research. We think it requires, however, communications on various practical topics, also, to make a medical journal what it should be.

Our department of Society Reports contains various theoretical and practical discussions, making an important feature for the practicing physician. Now we ask our readers—those who are not regular contributors—to give us an occasional communication, in any form and on any subject they may deem proper.

While such names as LeHardy, Banks, Doughty, Logan, Love, Taliaferro, and others, regular contributors, continue their contributions, we feel assured that our readers will not fail to be interested, yet we always have a vacant page for correspondents who will favor us with something new. We occasionally receive such from distant and neighboring States, as well as various sections of our own, and the interest in and usefulness of our journal would be greatly increased by cutting down the department of selections for the insertion of more such than we are now receiving.

Epidemics of various fatal diseases prevail occasionally throughout the country, such for instance as, meningitis, diphtheria, etc., in the treatment of which physicians differ materially. Nothing is more useful practically, than the publication of plans of treatment and statistics of mortality, and we earnestly solicit them from our readers.

We make the conduct of this journal a labor of love, and not pecuniary profit, and hope it will be made the medium of communications to the profession from many who have not heretofore felt it a duty to write.

EDITORIAL CORRESPONDENCE.

BARNESVILLE, GA., August 15, 1877.

Dr. John G. Westmoreland:

DEAR DOCTOR—I have just dismissed one of the most interesting and remarkable cases it has ever been my lot to have in charge, and if you will not think me tiresome, will try to give you a succinct history of it. Should you think it worthy of laying before your readers, you are at liberty to do so.

I was called on June 15th to attend Mrs. M., and found a case of labor at full term, which was terminated without any untoward event in two hours after my arrival. Her lying-in was attended with no unfavorable symptoms, and in eight days she was up, and, to all appearances, doing well. I saw her no more until the morning of June 29th, when I was summoned hurriedly to her bedside. I found her perfectly unconscious; pupils dilated; pulse 110. While making some inquiries as to her previous condition, I first noticed a slight twitching of the muscles of right side of face and arm. I suspected at once what was approaching, and quicker than the time it requires to tell it, a convulsion was upon her, with all its horrors. I realized the situation at once, and proceeded to act according to my best judgment. I proceeded to bleed her copiously, and with the constant use of chloroform by inhalation, I succeeded in arresting the convulsions about the middle of the afternoon.

I remained by her bedside during the night, looking each hour for the end to come. She, however, rallied during the latter part of the night; and without any sign of returning convulsions, on the morning of the 30th, while making a close examination of her case, I found her with complete paralysis of the right side, with loss of voice. I found considerable tenderness over the kidneys, with urine scanty. I diagnosed her case as one of urmæic poisoning, and proceeded to treat her accordingly. Gave her chloroform internally, with an occasional dose of squills and spirit nitre; expecting by the former to stimulate the cerebrum, and also to destroy the urea in the blood. The latter was given with a view of stimulating the kidneys to action. I had early in the morning given a brisk cathartic and applied a blister to nape of neck, the therapeutical indications being to promote the excretion of the urea by the proper emunctories, and also to favor its vicarious elimination by the bowels.

I will now give you a statement of her case, as taken from day to-day:

July 1st. Resting quiet, having passed an ordinary night; pulse 120; tongue slightly coated; complete paralysis of right side; slight coma. Still continued the chloroform internally, in twenty-drop doses every three hours, and occasionally a tablespoonful of the spirit nitre and syrup of squills.

July 2d. No improvement; continued treatment, with the exception of dropping off the squills and nitre, and giving instead, small doses of quinine.

July 3d. I think Mrs. M. better to-day; she passed a quiet night; no fever; pulse 86; kidneys secreting finely. No improvement in paralysis; continued treatment of chloroform and nitre; applied blister over each kidney, as there was considerable tenderness.

July 4th. Condition not improved; put her upon strychnine and quinine, leaving off everything else.

July 5th. No improvement in Mrs. M. to-day. Began use of electro-magnetism; continued treatment; some fever to-day.

July 6th. Passed a restless night; decidedly worse; slight twitching of muscles of affected side. Put her upon chloroform inhalations and twenty-drop dose internally every three hours.

July 7th. No improvement in her condition to-day. Was compelled to administer the inhalation of chloroform through entire night; convulsions imminent.

July 8th. Mrs. M. passed a quiet night under morphine and quinine. No sign of convulsions this morning; kidneys torpid; no improvement in paralysis or speech.

July 9th. Mrs. M.'s condition not much improved. Put her to-day upon iron, strychnine, and calisaya bark, with the use of electro-magnetism.

July 10th. About as yesterday; paralysis and loss of voice still prominent. Continued treatment.

July 11th. Appetite good to-day for first time; no fever; looking brighter; yet no improvement in paralysis; no return of voice. Continued treatment.

July 12th. Passed a good night, with symptoms about as yesterday.

July 13th. Had a slight fever last night; did not rest so well. Shall put her on small doses quinine, with morphine. Kidneys doing very well; bowels regular and natural.

July 14th. Slight improvement on yesterday. Began the use of iron, strychnine, and calisaya bark again.

15th. Was called to see Mrs. M. this morning; found her in convulsions. Had several during the night. I arrested them with chloroform inhalations. Pulse weak, and 125 per minute; pupils dilated; surface bathed in cold perspiration. Succeeded in reviving her by friction and mustard to extremities. I had about exhausted my skill, and soon saw that she must be relieved or death would soon supervene.

On the evening of the 16th, I put her upon ergot, as recent discoveries as to its medical properties indicated it in her case. I delayed not; must do something. I soon had her taking tincture ergot, every three hours, in fluid drachm doses. Gave her the first dose at eight o'clock. Remained with her during the night, giving the ergot myself. Imagine my astonishment and joy when, on the morning of July 17th, she looked absolutely like a new being. Could ask for water, say Yes and No, and, better than all, could move her leg and shoulder. Now, Doctor, on this day, July 17th, I began a series of interesting experiments. I could hardly believe my senses, in seeing her so much improved in one short night. Sometimes I would think it simply the vis medicatrix naturæ; again, I would think may be it is the ergot. So I decided to settle the matter. I suspended the ergot at twelve o'clock, on July 17th, and put her back on her old treatment—quinine, iron and strychnine. Had a patient in country, and did not return until six in the evening. I hurried up to see her, and found her laboring under all her bad symptoms, viz: twitching of the muscles, deep coma, etc. I gave her at once a dose of the ergot, and remained with her during the night, giving her the tincture every three hours in fluid drachm doses. By midnight her symptoms were better, and by day-break she looked bright, talked a little, moved her paralyzed limbs, and looked like getting well right away.

July 18th. Well, I am still a "doubting Thomas." Resolved to give her the ergot up to 12 o'clock, and then suspend again, and by night—would you believe it?—every single violent symptom returned. I began its use again, and by morning she was as bright as ever. I no longer doubted the ergot, and resolved to push it; so I gave it to her without cessation, from July 19 to July 23, with a steady improvement. On the 24th, I concluded to stop the remedy, for fear of producing unpleasant effects, but no sooner done than backward tendency ensued. I began its use again, and in a few hours all unpleasantness subsided. The fact is beyond doubt, that she could be oscillated back and forth as a pendulum. I longed to see her recover, but I must confess I did delight in watching with what promptness her case obeyed the drug.

In fact, I was sometimes cruel enough—partly through fear of injurious effects—to suspend its action and let her start backward, and then rush to her rescue with this potent remedy, and in no single instance did it deceive me.

I continued to give the ergot up to August 1st, with no unpleasant effect. She is, to-day, August 15th, sitting up, eating enough, and doing well. Such, Doctor, has been the beginning, middle, and ending, of, to me, the most remarkable and interesting case of my experience.

Yours truly,

W. C. Blalock, M.D.

Erratum.—On page 269, 13th line from top, "expensive" should read "*explosive*," our proof-reader never having heard of quinine exploding.

EXCERPTA.

To Relieve Morbid Thirst for Alcoholic Drink.—S. B. Merkel, M.D., of Philadelphia, writes to the *Journal of Materia Medica* as follows:

"A tonic and stimulant which partially supplies the place of the accustomed liquor, and prevents the absolute mental and physical prostration that follows a sudden breaking off from the habitual use of stimulating drinks:

℞.—Peppermint water,	ʒ xij.
Sulphate of iron,	gr. v.
Spirits of nutmeg,	ʒ ij.
Valirianate of quinia,	gr. ijss.

S. Teaspoonful taken as often as the desire for strong drink returns. I have had frequent occasion to test its efficacy in many cases in my practice, and have found it uniformly successful."

SIMPLE MODE OF CHECKING EPISTAXIS.—The *Tribune Medicale* says that, even after plugging the nares, injection of perchloride of iron, etc., have failed, an emetic, given to the extent of producing vomiting, will permanently check epistaxis.

REMEDIES FOR SLEEPLESSNESS.—In a recent exchange, Fothergill, after discussion of the cause of sleeplessness, tabulates, as follows, the remedies which have been hitherto the most highly recommended for this complaint:

1. Opium is indicated when sleeplessness is caused by pain; when irritation of the vascular system is present, aconite and antimony are to be combined with it.
2. Hyoscyamus is of service when sleeplessness depends on disease of the kidney.
3. Chloral hydrate is inefficacious in sleeplessness dependent on pain, though it is a hypnotic *par excellence* in the sleeplersness of fever, particularly in children. This remedy is injurious in ill humor, brain exhaustion, and in the sleeplessness of melanchly.
4. Bromide of potassium acts as a sedative either on the brain cells or vessels of the brain; it is indicated in those cases where peripheral irritations are present, and is very beneficial in the sleeplessness which is the result of maladies of the pelvic organs.
5. Alcohol is a powerful hypnotic in those cases in which sleeplessness comes from sorrow, ill humor, and mental disturbances.—*Nash. Jour. Med. and Surg.*

PHYSICIANS in want of SURGICAL INSTRUMENTS would do well to correspond with the PUBLISHER.

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Original Communications.

PUERPERAL INSANITY.

BY V. H. TALIAFERRO, M.D., ATLANTA, GA.,
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President of the Atlanta Academy of Medicine.

Mrs. ——, a young, healthy primipara, was delivered at term of a vigorous child, after an unusually severe and exhaustive labor. Save in its protracted severity, the labor was in every respect natural. The external soft parts were unusually rigid and unyielding, holding the head for several hours upon the floor of the pelvis, against the most rapid and powerful throws of labor. It was feared, and indeed expected, that the perineum would give way by rupture. This, however, did not occur, and the labor was terminated without accident to mother or child. For some days following, nothing unusual was observed unless it was in the *remarkably* good condition of the mother, after so severe and protracted labor. She expressed herself in the most cheerful and gratified manner, as perfectly well, and free from any feeling of oppression or exhaustion. The lochia was normal, the appetite good, and the sleeping good until the third night, when she complained that she had slept badly, though entirely free from the least restlessness, pain or uneasiness. On the following (4th) night, being again wakeful, she took, as directed, two small doses of bromide of potassium and chloral, after which she slept well, and awoke refreshed in the morning.

On the third and fourth days following the labor it was observed that there was not the usual accession of milk and distention of the breasts, and the mother complained at not having nourishment for her babe. No especial importance, however, was attributed to this, as it was ascertained that the nurse had applied the child to the breasts at *very long intervals*, upon the supposition that "there was nothing for it to get." The naturally large size of the mammary glands and the general physique of the patient gave every reason to suspect an early accession of milk, upon the natural stimulation of the glands by the frequent application of the child.

Up to this time, the fourth day after labor, two incidents only are worthy of note: the entire freedom from discomfort, with the rather extravagant expressions of the patient as to her *excellent condition*, and the absence of the usual active secretion of milk. About this time some little mental worry and anxiety was manifested at the absence of the milk, and the probable necessity of having to resort to artificial feeding of the infant.

The patient still continued to sleep badly, and taking a dislike to the bromide and chloral, morphine in fourth-grain doses was substituted with satisfactory results. So the case progressed until the sixth day following the labor, when the nurse, in whom she had great faith and confidence, left her to take charge of another case. This caused her much displeasure and worry, and she talked about it a great deal. Another nurse was obtained, to whom she soon took a great dislike, and in a few days discharged her. She now talked and worried almost constantly about her great trouble with her nurses, and it became manifest that there was a morbid mental condition, and the husband was notified of the probable danger of *puerperal insanity*.

From day to day the mental disturbance increased until *insanity* was unmistakeably established. The patient now talked incessantly and with great rapidity, except when asleep with opiates. The insomnia became obstinate and persistent, and the doses of morphine increased to one-half grain, and two or three doses given before getting the desired effects. Up to this time the physiological condition, aside from the mental manifestations, was good save in a *too rapid pulse*. In some ten or twelve days of the illness the pulse ran up to 135 or 140 to the minute, very feeble, and with considerable nervous prostration. Dr. W. F. Westmoreland was now called in consultation, and concurred as to the diagnosis and plan of treatment instituted. The abdomen was found slightly distended and tympanitic, and she was ordered a dose of saccharated calomel, which acted well, relieving the distention and tympanitis. Opium and chloral, which she had been taking, were continued, with the result, generally, of a good night's sleep, though the quantity necessary to attain this end, was increased every day or two. The rapid pulse and nervous prostration were greatly relieved, but without a corresponding mental improvement. From this time the treatment consisted of nourishment freely administered—the bowels occasionally emptied by saccharated calomel—morphine hypodermically, and chloral by the mouth, for some two weeks, when, the symptoms again becoming more grave, Dr. Simpson was called in consultation. The morphine and chloral no longer controlled, satisfactorily, the insomnia, and it was decided to give her bromide of lithia, which was administered in thirty-grain doses. This, after a few doses, was abandoned, because of its rejection by the stomach, and bromide of potassium substituted, in sixty-grain doses, by the rectum, every two hours, until three hundred grains were administered. The whole quantity was perfectly retained, and the patient slept for some ten or twelve hours.

The rectum now ceased to retain the bromide, and it was reluctantly discontinued, the stomach, also, being too irritable to tolerate the large doses necessary. The bromide was resorted to by the rectum at the time, because of the increased obstinacy of the insomnia, and the evident unpleasant effects of the large doses of opium and chloral which had become necessary to induce sleep. The powers of the bromide, as a hypnotic, were clearly demonstrated in this case—the patient going twenty-four hours without any other sedative, and having the best night's sleep after its use she had had since her sickness. Following its use, she ceased her incessant talking, her mental condition appeared improved, and strong hopes were entertained of a favorable turn in her condition. Such hopes, however, were of short duration. Frequently, during her sickness, the mind would clear up for hours, and sometimes for the entire day, when it would seem from her condition, both mentally and physically, that the dark cloud had really passed away, and no obstacle barred a rapid restoration to health. But alas! without warning, and in an instant of time, all would be changed, the most violent insanity re-asserting its complete supremacy.

A little more than a month from the time of the patient's confinement her condition changed decidedly for the worse. The pulse increased in frequency, the respiration, heretofore good, became excited, and the temperature, which had hardly gone over 102 was now 103¼ Far. Dr. W. F. Westmoreland, who had been absent from the city, and now returned, saw her again, and, although her condition was grave in the extreme, he felt hopeful as to the final result, believing the grave symptoms most likely dependent upon meningial inflammation of the brain, which it was hoped would be relieved by a large cantharidal blister upon the back of the neck, extending down the spine some six or eight inches. The blister was applied with some temporary improvement, but she soon was worse, and died on the second day after the application of the blister.

The literature of puerperal insanity affords us but little satisfaction as to the nature of the affection. Burns, who wrote in 1813, recognized different forms of puerperal mania. He speaks of the disease being "*dependent on a morbid irritation, such as inflammation of the mamma, etc.,*" and says that, "here our attention must be directed to the causes." Again, he says: "But I believe it never becomes permanent, nor does it prove fatal unless dependent on phrenitis. * * * * It (*phrenitis*) must be distinguished from from puerperal delirium, which is seldom dangerous, whilst this (*phrenitis*) is a most fatal disease.

Davis, cotemporary with Burns, assumes, likewise, the inflammatory nature of puerperal mania.

Rob't Gooch, the distinguished obstetrician, author and teacher, whose lectures in St. Bartholomew's Hospital, were published after his death, (the third American edition in 1840) says: "When puerperal mania does take place, the patient swears, bellows, recites poetry, talks bawdy, and kicks up such a row that there is the devil to pay in the house; it is odd that women who have been delicately brought up, and chastely educated, should have such rubbish in their minds." * * * * "The fatal cases seem to be those in which there is considerable disturbance of the circulation of the membranes of the brain; I have seen three cases of this kind; but those dependent merely upon nervous irritation do well." Thus it appears that Gooch also recognises several varieties of this disease.

Tyler Smith writing in 1858, says: "Genuine mania, or that which occurs shortly after parturition, appears to me to depend, in the great majority of cases, upon the shock of labor; the general and local irritation incident to delivery, and its immediate consequences; and upon the exhaustion produced by the accumulated effects of gestation and parturition. Except in the few cases in which inflammation of the brain occurs, when it is removed from ordinary insanity, the disease is, I believe, always attended by constitutional exhaustion."

Churchill in 1857, says: "The exciting causes are said to be fright, anger, sorrow, or any species of mental emotion," etc. * * * * "There is no reason to believe that it arises from inflammatory action in the brain." * * * * * "It maytermінate in death. This is almost peculiar to those cases where the pulse is quick, and fever is present."

Ramsbotham in 1860, writes of puerperal mania as follows: "To distinguish it from phrenitis is more difficult; as inflammation of the brain, however, generally appears sooner after labor than true mania, the period of the attack will in some degree guide us. The delerium attendent on phrenitis is preceded by fever and pain in the head, of a longer or shorter duration, with vertigo, singing in the ears, and a flushed cheek; incoherence in manner and expression is often the first symptom observed in mania. Sight and sound can scarcely be borne in phrenitis; they make little unusual impression on the maniacal patient. Inflammatory fever and increased heat of surface, accompany phrenitis in a high degree; in mania the former of these is absent altogether; and in the latter, if present, is but slight in intensity."

Leishman in 1873, says: "Although, therefore, we admit phrenitis' to be classed as a possible complication of the puerperal state, there is little likelihood of our diagnosis being obscured by such an occurrence. The very early period of its accession after delivery, and the manifestation of headache, suffusion of the eyes, and other local symptoms, referable to the head, would doubtless indicate the nature of the disease to the judicious practitioner. But not only do we discard the idea of inflammation as pathognomonic of puerperal mania, but we embrace without hesitation a directly opposite view, that it is essentially a disease of exhaustion."

Sir J. Y. Simpson in his clinical lectures on diseases of women, speaking of "*a complication of inflammatory diseases in the puerperal state*, says: "To this variety of mental disorder, which is no real form of puerperal mania, I refer now merely to warn you against the error of supposing that puerperal mania itself depends on any inflammatory affection of the brain or its membranes. Meningitis or phrenitis may come to be set up in any case of puerperal mania, and to increase in no small degree the patient's danger; but as was first clearly pointed out by Dr. Gooch, there is no necessary connection between the two forms of disease, and even their association in any case is but a rare coincidence." Prof. Simpson, as early as 1856, brought to the attention of the Edinburgh Obstetric Society his observations on the connection of albuminuria with puerperal insanity in four successive cases. In his work upon diseases of women, he says: "*a.* That albuminuria precedes and attends the first access of puerperal insanity in a large proportion of cases; but perhaps not so frequently and so constantly as it precedes and attends upon attacks of puerperal convulsions. I have found it present in eight out of ten cases of puerperal insanity at the commencement of the disease; and possibly it escaped observation in these two cases from not being looked for sufficiently in their progress. For it seems to me: *b.* That the coagulability of the urine in puerperal insanity generally disappears within a short time after the attack commences, and hence disappears more speedily than happens in puerperal convulsions. The fire of this disease goes on burning in these cases of insanity after the lighted match is merely applied, and the strange morbid clockwork runs on, as it were, after the key that wound it up is withdrawn. I have seen all traces of albuminuria in puerperal insanity disappear from the urine within fifty hours, from the accession of the malady. The general rapidity of its disappearance is, perhaps, the principle or, indeed, the only reason why this complication has escaped the notice of those physicians among us who devote themselves with such ardor and zeal to the treatment of insanity in our public asylums."

Prof. Simpson again says: "In the blood of the puerperal female—greatly modified as it is in the normal states of pregnacy and delivery, and containing as it does after parturition the effete elements of the involving or disentegrating uterus, and the materials for the new lochial secretion—ferments, and agents may possibly exist, which are more apt to develop special morbid poisons out of the retained renal excretions than happens in other states of the system. But I repeat, the whole subject is yet quite dark and conjectural, and will remain so till pathological chemistry is able to cast some light upon it."

Fordyce Barker, in his work on puerperal diseases in 1874, gives as the most prominent *predisposing* causes: 1st. Hereditary tendency; 2d. Dystocia. In reference to the exciting causes he says: "It is my firm conviction that mental emotions constitute the exciting cause of puerperal mania infinitely more frequently than all other causes combined." In proof of this assertion the relative frequency of puerperal mania in a number of lying-in hospitals is given.

In Wiirzburg, the proportion of cases of mania to the whole number of confinements was 1 in 1,487; in Prague, 1 in 1,228; in St. Giles Infirmary, 1 in 1,888; in Queen Charlotte's Lying-in Hospital, 1 in 182.

In explanation of the marked increase in the percentage of cases in the latter institution, Prof. Barker says: "A large majority of patients in our lying-in wards are of foreign birth. They have come to a new country, leaving friends behind, with the hope of improving their condition, and many are disappointed in this respect. A large proportion probably one-half are unmarried." "Very many of these are suffering the disgrace of seduction and abandonment. In addition to this, I am well convinced that our climate has a marked influence in developing the nervous susceptibility of Europeans who come here. Then, again, there is no part of the world where the lapse from virtue in women is so surely punished by social ostracism as in New England, and she contributes her quota of poor girls who rush to a great city to hide themselves, and are at last driven to the hospital as their only recourse."

Prof. Barker thinks if statistics prove anything, "they prove that moral emotions are the great exciting cause of puerperal mania."

The social and domestic relations of the case I have detailed here were all that could be desired, and therefore preclude the probability of these having any agency in her insanity. Yet the starting point of the mental disturbance was manifested upon the loss of her nurse, to whom she was greatly attached in the first place, and subsequently agravated by a nurse to whom she took a great dislike, and who told her alarming stories of the sufferings and dangers of lying-in women.

Barker and Leishman, who have given this subject of late years careful and earnest attention, differ but little as to the causation—the one looking to the mental and moral emotions, and the other chiefly to nervous exhaustion; indeed Churchill, Tyler Smith, and Ramsbotham are much on the same line.

With all the lights before us, it would seem that a combination of circumstances most likely exist to give rise to puerperal mania: 1st. A predisposition, hereditary or acquired; 2d. Nervous exhaustion; 3d. Mental or Moral emotions; and possibly, 4th. Poisonous or excrementitious material in the blood from the involving uterus, or from the kidneys. Two or more of these may be sufficient to give rise to the disorder, and again the force of the entire combination may be necessary.

It is well known that hysteria is the product, most usually, of uterine irritation, but it by no means follows that every woman with uterine irritation must have hysteria. Why, from the same cause, some have hysteria and others do not, we can explain in no other way than by a peculiar nerveus organization or susceptibility—these being congenital, or acquired by habits of life, etc. So with puerperal mania, while many resist the combination of causes mentioned, the few, from some unrecognized and unknown predisposition or nervous susceptibility, yield.

The insanity of pregnancy, and the insanity of lactation, must not be confounded with *puerperal mania.* This disorder, as indeed all forms of insanity may, and not unfrequently do, comepletely mask grave organic diseases. Upon this point Prof. Barker gives us the following precaution: "In this hospital (Bellevue) one patient has died with pelvic peritonitis, another with pneumonia, and a third with pericarditis and endocarditis, and in neither was the disease suspected until revealed by autopsy." In the prognosis, we are told by Gooch, William Hunter, Simpson, and others, that excessive vascular action portends danger to life. We know that excessive vascular action portends organic lesion; therefore, a rapid pulse would seem to indicate organic complications as the real seat of danger to life. We must conclude, then, that insanity, whether puerperal or otherwise, cannot become grave in reference to life without organic lesion. It is true, we may have death from nervous shock, nervous exhaustion, etc., but certainly not from the shock or exhaustion that fails to be manifest for days. In the case presented, the physical condition was fine both before and after labor. There was no loss of blood. There was no accident or circumstance calculated to exhaust the powers of life, save in the *hard labor*. The patient was in splendid health, and reacted at once from the shock and exhaustion of labor. In a healthy subject we are not to expect serious exhaustion from the pains of labor, though severe and protracted. The pain is physiological, and, ordinarily, not exhaustive. Hence, we are unable to accept, in toto, the *exhaustive theory* of the distinguished authors quoted.

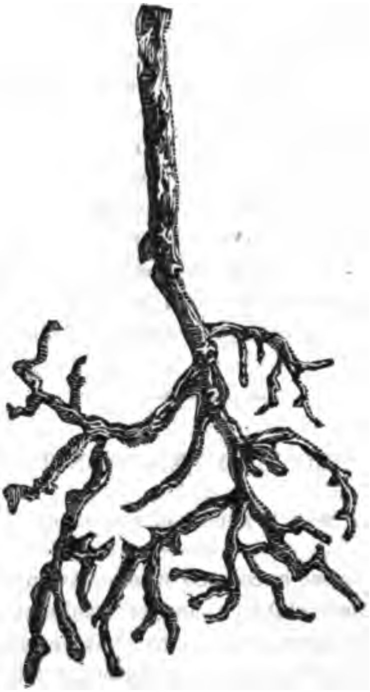
We are driven to the conclusion that, in the case reported, there was organic disease masked by the insanity so completely that nothing short of an autopsy could possibly have revealed the true pathological condition and cause of death.

BRONCHO-PNEUMONITIS.

By R. B. ANDERSON, Roswell, Ga.

Was called to see a colored woman twenty-two years old, the mother of four children, and of a tuberculous family, several of her sisters having died with what was supposed to be tuberculosis. Her mother is yet living, but is said to be consumptive. I saw the patient first on the 30th of August, at 10.40 P.M., and found her suffering with great difficulty in breathing, requiring to be propped in bed, pain in the abdomen, cough, with bloody expectoration, very frequent, quick and small pulse. Bronchial sibilant rale was the prominent sound revealed by auscultation on both sides of the chest, with general dullness on percussion, all over both lungs.

I learned from Mr. Hook, an intelligent gentleman, whose father was former owner of the patient's family, that she had been complaining of diarrhœa for several days, and had frequent paroxysms of cough, with bloody expectoration. He had preserved, and presented to me, a clot which had been discharged during a fit of coughing, a short time before my arrival. This, on inspection, proved to be a complete cast of one of the bronchial trunks and its branches. He reported the patient on the point of suffocation before this was discharged.



Never having met with so interesting and rare pathological specimen, I had it photographed for the preparation of the accompanying cut. It had been slightly mutilated, perhaps before it came into my possession. This I very much regret, but the cast is sufficiently perfect to show distinctly a mould of the tube and ramifications. The trunk, in its flattened position, measures three-eighths of an inch, and the arborescent formation of trunk and branches measures six inches in length, and three inches across the branches, when lying, as nearly as I can place them, in their natural position, after the loss of a portion.

Whether this is a pseudo-membrane, consisting of fibrinous formation, the result of diphtheritic inflammation, or the separation, entire, of the broncial mucous membrane, I am not able to decide. Certainly, however, we have an exact mould of the respiratory tubes in the specimen. The former appears more probable, and the distressing dyspnœa is readily explained on this hypothesis, particularly when it is remembered that the patient was apparently saved from immediate suffocation by the discharge, as reported by Mr. Hook.

The treatment was commenced with one grain doses of opium, tincture of aconite and nitre, and to be continued until my return the next day.

August 31, eight o'clock P. M.—Pulse 140, full and strong. Prescribed tincture veratrum in the dose of three drops, nitre and opium as became necessary to give relief from pain.

September 1, six o'clock P. M.—Pulse 130, some general improvement. Increased the dose of veratrum to four drops, and ordered the chest well rubbed with oil of turpentine.

September 2, six o'clock P. M.—Pulse 126, cough more frequent—continued same treatment.

September 3, seven P. M.—Complains of sense of suffocation, and pain in abdomen; bowels have been moved. Continue same treatment.

I was not able to see the case any more till her death, which occurred on the 4th inst, and regret the circumstances which conspired to prevent autopsy. This would certainly have settled several doubtful points in the case.

COLO-RECTITIS.

By J. G. WESTMORELAND, M.D.

Bowel affections take special names according to the part diseased—names which indicate, not only the particular location, but the pathological condition, also. Other names, indicating some prominent symptoms, are often used—I may say almost exclusively—for the various forms of bowel disturbance. Diarrhœa, for example, simply indicating frequent, copious flow from the bowels, is used for the name of the disease or disturbance, whether it be irritation, acute or chronic, inflammation of the mucous surface of the bowels, or unusual effusion into the canal from other cause. The name only has reference to the free discharges from any of the causes mentioned, and has, therefore, no pathological nor therapeutical significance. Diarrhœa from acute inflammation of the alimentary mucous membrane, is very different, therapeutically, from diarrhœa caused by copious watery exhalations into the canal.

The same error is prevalent in regard to the disease which heads this article. Dysentery, a term indicating painful, difficult discharges, from any cause, is the name commonly applied to inflammation of the rectum and lower portion of the colon. This dysentery — difficulty in evacuations — is a prominent symptom of inflammation in these parts, and, although it may be the result of other forms of disturbance, the term is very generally used when the inflammatory condition exists. Mere irritation of the rectum, causing unusual spasmodic contractions, which produce this symptom, may with equal propriety be called dysentery. With those who conclude that this symptom is sufficient indication of the disease, and that the same remedy or plan of treatment is always proper in difficult evacuations, this error is particularly mischievous. A grain of opium which has effectually controlled the dysentery arising from irritation of the lower part of the canal, will be found insufficient to cure acute inflammation of the organ.

Moreover, this symptom may be constantly present, when the disease extends much beyond the parts mentioned. Even gastro-enteritis may be accompanied with distressing tenesmus, on account of inflammation in the rectum, also. It must be remembered, too, that there are various degrees of inflammation, as regards its violence and extension into the sub-mucous tissues; all of which produce violent dysentery, but demand more or less vigorous treatment, according to its activity and extension.

During summer and autumn, mucous inflammation of the rectum and colon sometimes prevails extensively, assuming the magnitude of an epidemic. Such form of the disease will be found less under control of ordinary means. Opium will, however, generally be found a suitable test of intensity, under such circumstances. In dysentery from temporary irritation, or slight inflammation, limited in extent, one-fourth grain of morphine will be found sufficient to allay all the dysenteric symptoms for several hours, while in violent inflammation, such as attends the epidemic form, the frequent paroxysms are not arrested by opiates. In both, however, the suffering and frequent evacuations are equally distressing to the patient. Not only so, but bloody and mucous discharges, in slight and superficial inflammation of the rectum, are about the same as when the disease is more extensive and violent.

A knowledge of the cause of colo-rectitis certainly should give decided therapeutic advantages. If torpor of the liver, leading to imperfect circulation through the portal vessels, should be the prime factor in its production, as some suppose, the treatment ought, of course, to include means calculated to relieve this difficulty. Whether the more violent cases of the disease depend upon this cause or not, it seems quite reasonable to conclude that sporadic cases, at any rate are often relieved by means tending to restore activity to the liver. Moreover, the fact that violent epidemic colo-rectitis is not usually controlled by such means alone, is not positive evidence against this opinion, because it is a well known fact that subsidence of the cause does not always lead to relief of the inflammation. The cause should not, of course, be suffered to continue, but when the effect has been decided, other means are necessary. Traumatic inflammation often attains such a degree of activity that removal of the ball or other exciting cause is not sufficient for its arrest.

In consideration of these facts it is not at all surprising that very different means are necessary in the treatment of various forms and degrees of disease producing the symptom dysentery.

As above stated, very simple means sometimes promptly relieve very distressing tenesmus tormina and bloody discharges, owing to the inflammation being slight and limited in extent. A pill, composed of tannin, opium and blue mass, repeated as circumstances require, leaves no further trouble in many cases. When, however, this course does not afford even temporary, decided relief, a continuance of the mercury beyond a few days does not seem to be called for. Indeed when from the violence and persistent character of the inflammation great prostration is likely to insue, mercurials continued are no doubt injurious, and should be substituted by nutritious and supporting means. While astringents, opiates, demulcents and counter-irritants are continued to lessen the local inflammation, the final prostration likely to result must be anticipated by the use of nourishing soups, milk and other kinds of unirritating fluid diet, and the support of nervous power by alcohol in addition to opium. Blistering should not be deferred beyond the time that the persistent character of the disease is determined, by the failure of opium to arrest, for several hours, the discharges.

Saline cathartics are doubtless serviceable at the commencement of the disease, by the depleting effect thus had on the engorged blood-vessels of the bowels, and the removal of hardened irritating fæces which sometimes remain above the diseased portion. The too long continuance of their use, however, must necessarily add to, instead of lessening the existing inflammation, by keeping up constant agitation of the inflamed part.

We cannot speak too highly of the local application of opiates, astringents and demulcents, by injection into the rectum, while they are being used by the mouth. When given in this way they come in contact with the inflamed mucous membrane, while in full strength; and we have witnessed very prompt relief in this way from the unpleasant symptoms when they had resisted their use by the stomach.

THE USE OF BROMIDE OF POTASSIUM HYPODERMICALLY.

BY WM. A. ADAMS, M.D., BRYAN, TEXAS.

It is with some reluctance that I speak of the subcutaneous use of medicine, after having read the alarming results of this mode of administration in the last issue of the ATLANTA MEDICAL AND SURGICAL JOURNAL.

As the danger of all theraputic agents is commensurate with the quantity, their specific therapeutic action and idiosyncrasies of different individuals; and as bromide of potass. is unprecedented for its innocence, I shall not hesitate to give my experience.

On the 18th of June, I visited a child three years of age, that was having *spasms.* On examination, and from the history of the case, I diagnosed remittent fever. They were characteristic of infantile spasms of this fever. They occurred at intervals of fifteen or twenty minutes—during the intermission vomiting was incessant. I endeavored to give bromide of potassium by the mouth as an anti-spasmodic, but in vain; I decided to use grs. v. hypodermically it being soluble in a very small quantity of water, This quantity was readily administered. My little patient had no more *spasms.* Of course, I used the magnum Dei donum, (sulph. of quinine,) as a prophylactic against the recurrence of the fever, which caused the paroxysms.

There was no unusual inflammation at the region punctured, as some times follow, this mode of giving quinine.

On the 2d of July, I had a similar case, aged seven years. I used the bromide hypo. grs. vii. with the same good effect. I have also used this method in cases of epilepsy, with not so marked effect.

Great prejudice has arisen, I fear, against this mode of administration, especially the use of morphine, from the fact that physicians are too careless about the quantity they give. Indeed I hold it is malpractice to give morphine hypodermically, without knowing accurately its weight. Patients who are not accustomed to morphine, the maximum dose to begin with should be ⅙ of grain, repeated if necessary; and if this rule be observed, however marked the idiosyncrasy of your patient may be, I don't think there would arise any necessity, however, noble hearted one might be, for changing the nomenclature of diseases, for example, opium poison to "appoplexy."

PLEURO-PNEUMONIA, WITH SUBSEQUENT SCORBUTUS.

By D. W. SCOTT, Castlemount, Ga.

I was called, January 19, to Nathan ——, æt seventeen, and found him with considerable dyspnœa, so much so that elevation of the shoulders was frequently necessary, and with excruciating pain in the right side of the chest. I learned from his friends that two days previously he was suddenly attacked with chill and marked rigors, followed by high febrile excitement.

After careful examination of both lungs, it was evident that the right lung and pleura were involved in active inflammation. Some soreness of the mouth also existed, which I could not at the time account for. His appearance indicated extreme anxiety and suffering; pulse was moderately strong and numbered about one hundred and twenty beats to the minute.

The usual treatment for similar cases was adopted, such as veratrum, to control the heart's action, and thereby lessen the amount of blood carried to the engorged and inflamed parts, blister on the affected side, calomel, etc. The pain was lessened at once by opiates, and the unpleasant symptoms measurably controlled permanently, after the sedative and blister had acted.

Under this course of management the patient was soon convalescent, and on the 24th, five days from my first visit, and about one week from the attack, he was dismissed, as I supposed, free from danger of further difficulty. Ten or twelve days subsequently, I was again called to arrest persistent epistaxis. Applications by injection, and the tampon, of tannin, muriated tincture of iron, etc., gave no permanent relief from the hemorrhage, and indeed other parts, such as the gums and mouth generally seemed to take on a hemorrhagic disposition, with apparently fungus granulations on the tongue.

I learned from the patient that shortly after being relieved from the pneumonic attack, he was troubled with intolerable itching over the whole surface of the body, which subsided as the hemorrhage from the nose and other parts commenced. The hemorrhagic condition continued till the patient's death, on the 15th of February, one week after being called the second time, and nearly a month from his attack of pleuro-pneumonia.

As to the origin and nature of this scorbutic or hemorrhagic condition, I am at some loss to determine. I have not decided to. call it purpura hemorrhagica, but as scurvy will include other forms of depraved blood, think proper so to denominate it. Now, whether this state of the system led in any way to the acute pneumonic attack, or whether the scurvy was the result of debility caused by pneumonia, is more difficult to decide. Two facts must be taken into the consideration of this question: The patient, I learn, had been an inveterate salt eater. His food was made so salty that no one but himself could relish it; and the circumstance mentioned before, of his having sore mouth when first seen with pleuro-pneumonia. These facts seem to justify the opinion that, at least, the scorbutic condition was independent of the pectoral trouble, whether the former had any agency in the production of the latter or not.

Reports of Societies.

TRANSACTIONS OF MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

[EXTRACT.]

"Relations of cases" being in order, the following were given to the Society:

CASE I. Dr. Jno. N. Monmonier, had been called to see a child eight years of age, who was bleeding profusely from a wound of the tongue. The list of styptics having been exhausted before his arrival, without benefit, he decided to resort to operative interference, viz: to pass sutures upon either side of the wound, draw it together and stuff the interstices firmly with lint, and tie the sutures over the compress thus formed. By this means direct pressure upon the bleeding vessels was obtained, and the hemorrhage controlled. The sutures were removed the next morning and the case did nicely.

CASE II. Dr. Thos. R. Brown brought before the Society a patient, upon whom he had operated, with the following history:—X. Y., aged fifty-five, received about one year ago, a blow over the right inferior maxilla, with a piece of iron; soon after a swelling of the gum was noticed, and two teeth were extracted by a dentist, who supposed the swelling to be the result of a dental abscess. The tumor continued to grow, however, and Prof. Smith who saw it diagnosed it an epulis. The case came subsequently under the notice and care of Prof. Brown, who, regarding it as malignant, advised its removal, which was effected by an incision commencing to the left of the median line of the chin, descending by a curved line to the inferior margin of the maxilla, and passing backward to the ramus. The bone was then nicked with a saw and the diseased portion was broken away. The flap was restored to its place, and, notwithstanding the extent of the surface made bare, the wound healed by first intention. The line of incision is hidden by the beard, and the patient suffers little or no deformity.

CASE III. Dr. A. B. Arnold stated that he had had recently, in one family, five cases of diphtheria, occurring consecutively; one of these he lost, and in this case the disease had *invaded the larynx.* The other cases, although very severe, were free from this complication. The point he desired to make was, that when the larynx is free from the diphtheritic invasion the disease is not so dangerous.

Dr. Lynch stated that his experience confirmed this view, and that the establishment of cinchonism early in the history of the case is *very frequently preventive* of the laryngeal complication. Since his adoption of the quinine treatment his proportion of fatal cases has been much smaller.

CASE IV. Dr. C. C. McDowell relates a case of scleroderma occurring in a patient three weeks of age. The child had been from birth subject to occasional attacks of partial pulmonary collapse, and after the establishment of the dermal lesion, it was always exascerbated by an attack of the pulmonary collapse, so that the two diseasses seemed to bear a relation to one another—perhaps that of cause and effect. The cutaneous surface was largely involved. During the pulmonary attacks warm baths, artificial respiration and stimulants, were resorted to; in the intervals an inunction of iodine and iodide of potassium was used. Four or five weeks of treatment were necessary and the child gradually recovered.

CASE. V. Dr. Arnold related a case of chorea which had resisted all usual forms of treatment for two and a half years, but which yielded to enforced *absolute rest* of the voluntary muscles, *in bed*, combined with alternated hot and cold douches to the spine. (Iron was also used against the concomitant animia.)

PROCEEDINGS OF THE COLUMBUS, O., ACADEMY OF MEDICINE.

REPORTED BY GEORGE S. STEIN, M.D., SECRETARY.

STATED MEETING, May 25, 1877.

Dr. Neil, Vice-President, in the Chair.

Medico-Legal Case.—Dr. Loving reported the following case:

A physician, a friend of his, had been indicted for selling whisky, it being claimed that the whisky produced delirium and death. The man died on the third day. The patient was under the care of a physician, who gave him thirty-grain doses of hydrate of chloral every two or three hours, until he had taken, in all, two hundred and ten grains. He took two hundred and ten grains of chloral, and one grain of morphia, in twelve hours.

He said the patient was drunk, delirious, and had convulsions; he took these narcotics, and died after taking the last dose of chloral.

What killed him? What was tne cause of death? Was it whisky, chloral, or laceration of the septum between the ventricles of the heart? Which was found after death?

He was inclined to believe that the man's death was produced by the narcotics, and that a laceration of the septum occurred just before death, the heart being distended with blood, and in its violent movements the septum was lacerated.

Case of Uræmia.—Dr. Oleson reported a case of uræmia, following scarlet fever, for which he had prescribed hard-cider and muriated tincture of iron; but convulsions came on frequently. He then thought of Dr. Pooley's experience with the old-fashioned corn-sweat, in a case of uræmic convulsions, which he reported to the Academy a few weeks ago.

He tried it, and in a half-hour the patient got easy, and improved. He said that the rapidity with which his patient got to sweating, was interesting to him.

Dr. Loving said that the corn-sweat is fully equal to any vapor-bath that could be devised. He then spoke of the novelty of the thing, and said that if we were in New York, and commenced putting hot corn into the bed of a patient, they would look upon us as outside barbarians.

Case of Prolapse of the Vagina and Uterus.—Dr. Kroesen then read the history of the following case:

Mrs. D., aged thirty-nine, married, has had six children; has never aborted; is about the medium height; has enjoyed good health generally until within the last two years; during this period has complained of more or less "weakness" in the pelvic region; menses have been regular until within the last four months; complains of a dragging sensation in the pelvis, with but little pain.

Upon examination, it was found that the uterus was pretty well down in the vaginal canal, and the os pressing upon the floor of the pelvis, its body somewhat enlarged; no heat or tenderness of the vagina; no rectal or vesical irritation; no pain in the back or loins; but there was a certain amount of pelvic uneasiness on attempting to walk, with considerable leucorrhœa. He thought, at first, that it was a case of simple prolapsus uteri, and suspected the possibility of pregnancy; but none of the symptoms of that condition being present, and not wishing to catch up a hasty diagnosis, he left the patient with some directions as to local and general tonic treatment.

One evening he was called hastily to see the case, and found that there was a discharge of water from the uterus, and that she was pregnant, and that an obstruction was about to supervene. The following night was called again to see her, and found her complaining of something protruding from the vagina. On examination, he found a large tumor protruding, apparently as large as a new-born infant's head at full term. It was of a pear shape, the stem end being in the vagina.

A tense congested state of the tumor, with a smooth and tough exterior, was transmitted to the touch. The large end, or base of the tumor, was indented and curved upon itself, and from this part protruded the lower half of a small fœtus.

There was no pain complained of by the patient; no expulsive action of the uterus—only a sense of fullness and throbbing, with discomfort, existed. Physical exploration revealed the uterus to be within the labia, the os enclosing the head of the fœtus with a vice-like grip. An attempt to relieve the head failed, from the firm, constricted condition of the os that held it.

The diagnosis of the case was abortion, with prolapse of the vagina and uterus.

Treatment.—Not being able to relieve the fœtal head, the fœtus was returned, together with the prolapsed vagina, within the labia. This was not attained without some trouble in the tumor, because in a measure strangulated. After it was returned the prolapsed organs failed to remain in situ unless supported by the hand. This support had to be constantly given, until the fibres of the os relaxed sufficiently to enable the fœtal head to escape from its embrace. The hips were elevated and the usual treatment given for such conditions; after the cessation of the lochia strong astringent washes for the vagina were prescribed, with general tonic treatment, diet, regimen, etc. The result was good, and the patient recovered without any further trouble.

The cause of this condition was, in his mind, due to a gradual loss of tone in the vaginal walls and subjacent structures, pregnancy furnishing the exciting cause. He thought that during the period that elapsed from her last pregnancy (eight years) a variety of changes in the structure of the parts occurred. The absorption of surrounding tissue and kindred changes the natural strength and tonicity of the vaginal canal might furnish the predisposing cause. The development of the canal and increased weight of the uterus come from the pregnant condition. The enfeebled condition of the sphincter muscles might unite in producing this condition. The occurrence of absorption, uterine and abdominal contractions forcing the abdominal viscera down the canal, might also produce this state of affairs.

STATED MEETING, June 1, 1877.

Dr. Neil, Vice-President, in the chair.

Case of Hemiplegia.—Dr. Norman presented a pathological specimen of a brain removed from a man sixty years of age, who became hemiplegic three years ago. No complete history of the case could be obtained, except that he had lapses of consciousness—severe pain in the head. A year ago he could not speak or swallow; three weeks ago was struck on the side of his head; no fracture of the skull, but considerable ecchymosis, at the place of injury. Post-mortem showed some softening of the right crus cerebri; some atheromatous degeneration of the arteries; all the arteries of any size were plugged with thrombi.

Case of Abortion.—Dr. Pooley presented an ovum, with its membrane intact, of two months' impregnation. He said three weeks ago an attempt at abortion was made, which was followed by a slight oozing of blood for a week or two. Last week a severe hæmorrhage took place, with great pain. He then removed the ovum entire. It showed several punctures, which, he thought, were made by an instrument; there were also deposits of fibrin, which were evidences of recent inflammation.

Necrosis of the Carpus and Metacarpus.—Dr. Pooley reported the following case: Nine months ago the patient fell and sprained his wrist; the joint now is inflexible; great swelling on the dorsum; has pain and fever. Has taken iron and quinine for a long time. There were no sinuses. He made two lateral incisions, and all the bones of the carpus and ends of the metacarpal bones were removed, some of them, piecemeal.

Since the operation the patient has done badly; has no pain or fever, suppuration normal, and pus healthy. He has gradually sunk into a condition of lethargy and coma, preceded by delirium. He has no chills nor sweatings; pulse 92, full and regular; arteries are hardened by calcification. He lies in a semi-conscious state; talks deliriously; his face is flushed, but not hot; refuses to take food. He thought his condition seemed to be that of cerebral anæmia.

Case of Procidentia Uteri.—Dr. Loving gave an outline of a case of procidentia uteri, in which pregnancy took place, and which he thought a rare occurrence. The lady was twenty-one years of age; has been married eighteen months. When he first saw her she was pregnant; complained of great pain in the hips; she was unable to walk, and had great difficulty in voiding urine. She objected to an examination, and went on in this condition to her full term. He was in attendance at labor, and she refused again to have the necessary examinamade, until she was well advanced in labor. Immediately within the vulva the os uteri presented: the labor went on satisfactorily and she gave birth to the child. Everything went on well after the labor, except that the uterus did not return to its place.

Sometime after this the patient went to Illinois to consult a gynæcologist for treatment, but the last time he had heard of her she was hardly able to walk. He also remarked that this lady suffered with procidentia uteri long before her marriage, and he considered it an uncommon case.

Laceration of Perinæum.—Dr. Loving said that modern teachers in obstetrics urge the propriety of attending immediately to laceration of the perinæum. In his time he was taught to wait until after the labor; until the wound had healed over. He had a case once which he stitched, he put in three stitches. His teacher advised him to take them out, which he did.

Two weeks ago he was called to attend a lady in labor—primipara of a rigid fiber—tense habit; at the last pain laceration of the perinæum occurred, not involving the rectum. He immediately put in three stitches, which were removed on the fifth day, the laceration being entirely healed. This he considered exactly the thing to do, and to do it at once.

Drs. Neil and Loving, delegates to the American Medical Association, then gave an abstract of the proceedings and workings of the different sections of the twenty-eighth annual meeting of the Association, held lately in Chicago, Illinois, for which a vote of thanks was tendered them by the Academy.

STATED MEETING, June 15, 1877.

Dr. Neil, Vice-President, in the chair.

Fracture of the Clavicle.—Dr. Kroesen reported the case of a child, nine years of age, who fell from a wagon to the ground; the shock of the fall was received on the back, producing transverse fracture of the clavicle on the opposite side of the shoulder.

Dr. Pooley said this was an interesting case, and one of unusual occurrence. He thought the fracture was produced by violent contraction of the muscles of the back, and that it could only be accounted for in this way.

Drs. White and Loving also said the fracture in Dr. Kroesen's case could only be accounted for by muscular contraction.

Cholera Infantum.—Dr. Loving then inquired of the members of the Academy whether cholera infantum and acute inflammatory diseases of the alimentary canal were not prevailing more than usual in the city at this time, and what was their experience with it? He thought it rather early in the season for these diseases, but he has observed that the first warm weather in June generally brings cholera infantum, cholera morbus, and acute diarrhœa, and that if the weather continues very warm these diseases will continue through July and August; if, however, it gets cool, dysentery will appear, and if it changes again to a warmer temperature, cholera infantum and cholera morbus come on again. He said if this be true, we can, to a certain extent, prevent and avoid them, and prepare and regulate ourselves for them.

Drs. Nunnemaker, Kroesen, Neil, White, and Stein, then related their experience with these diseases.

Dr. Nunnemaker inquired of Dr. Loving whether wet weather had any influence on cholera infantum, and how would he explain it?

Dr. Loving said he did not know if moisture had any influence; if it had, he had no explanation; but he had observed that the temperature of the weather produced the changes which he alluded to. He also observed that in wet, cold summers dysentery is more common than in dry summers.

Dr. Fullerton wished to know whether the treatment could not be improved; the great cause was *heat*, and if we could get command of the temperature, we would have better results in our treatment. If we could devise some apparatus so as to regulate the temperature of rooms, he thought it would influence very favorably this disease.

Dr. Pooley said his experience with cholera infantum was, that if the weather became very warm, suddenly in June, it produced cholera infantum, and also that he was always more solicitous about those cases than with those that occured later in the season.

In regard to treatment two things were important. The first was that concerning the subnitrate of bismuth. If this agent was rightly used, it was a very valuable remedy, and if not, it was one of the most valueless. In small doses of five or six grains, it was of but very little value, but in half-drachm doses it was an admirable remedy. He then related the following case: "Was called to see an infant in the evening, three months old; it looked just as if it was dying; vomiting and purging incessantly; had all the symptoms of collapse; large discharges, of rice-water character; ordered half-drachm doses of subnitrate of bismuth to be given every hour.

The result was, in the morning the child was almost well, the vomiting and purging had ceased.

In older children larger doses must be given, and the remedy must be pushed to do good. If the bismuth does no good in twelve hours we must resort to some other remedy.

The second thing to do is to use cold water compresses to the adbomen. The child should lie on a hard bed, be lightly covered, and the abdomen covered with cold compresses.

This relieves the pain and heat of the abdomen. He also remarked that there was something remarkable in the slight changing of location. Sailing down a river, or visiting some island, or going half a mile into the country had a very marked influence over the disease. When we have severe and threatening symptoms; when the child is exceedingly emaciated, and after the acute symptoms have passed, then he would recommend salicine, one grain every two or three hours, and to anoint the whole body with cod-liver oil.

Dr. Kroesen spoke of the influence of locality, and agreed with Dr. Pooley's remarks. He thought it had a great influence over this as well as some other diseases.

Dr. Loving said that in the use of bismuth we must recollect that it is sometimes adulterated with arsenic, and the large doses might prove injurious. It was also a question with some whether the beneficial effects were not due to the arsenic rather than to the bismuth. He also had observed that after the administration of bismuth the breath had an alliaceous odor, and that it could generally be observed in a few hours after taking bismuth. Another important thing in the acute stage of cholera infantum was the administration of cold water. The almost incessant craving for water was, to him, a most painful symptom. He had labored under the delusion that it aggravated the vomiting and the disease. He now allows his little patients to drench themselves with water; he gives them as much as they will drink.

Ohio State Medical Society.—Dr. Pooley then, at the request of the Academy, gave a short sketch of the proceedings of the Ohio State Medical Society held during the week at Put-in-Bay. He said the meeting was not large but pleasant, everything was pleasant, agreeable, and harmonious. There was not a breath of ethics, etiquette, or professional honor. The Society will meet in Columbus on the third Tuesday in May, 1878.

STATED MEETING, June 22, 1877.

Dr. P. M. Wagenhals, President, in the chair.

Case of Iodism.—Dr. Oleson reported a case of iodism, in which five doses of iodide potassium, five grains each, produced this result. It was given for an ordinary eruption on the leg. The symptoms were lachrymation, swelling of the eye-lids, coryza, and an acne eruption over the body.

Dr. Loving inquired whether the patient had taken iodine or mercureals before, or whether it was not due to an idiosyncrasy. He referred to a case of arsenical poisoning, which was produced by taking three drops of Fowler's solution.

Dr. Oleson said she had taken no medicine for fifteen months.

Dr. Pooley thought this an interesting and important case. Some persons can take no iodine at all, others can take one hundred grains of iodide of potassium at a dose. It is no more likely to produce iodism in large doses than small ones. A good plan is to commence with small doses and increasing them rapidly. In syphilis there is a point of tolerance, and when this point is reached the symptoms disappear.

Case of Poisoning.—Dr. Loving reported briefly a case of poisoning with rhus toxicodendron. He said that a solution of iodide of potassium will relieve it, but from his experience he found that

Sodæ sulphite,	ʒii.
Chloral hydrate,	ʒi.
Aqua,	Oj.

M. For a lotion.

a much better remedy. It relieves in a very few hours.

Chronic Bright's Disease.—Dr. Norman reported the following case: Mr. ———, aged forty years, two years ago had typhoid fever. A week ago, in the evening, was taken with a chill, followed with fever, pulse 120, temperature 103½. Supposing it to be an ordinary intermittent, prescribed a cathartic and thirty grains of sulphate of cinchonidia. Next morning better—next day had suppression of urine, and the next morning symptoms of uræmic poisoning. A tablespoonful of urine was obtained by the introduction of a catheter, and upon examination it was found to be highly albuminous. The symptoms soon were double vision, delirium, contracted pupils. He grew gradually worse and died.

Post-mortem: Kidneys much enlarged with chronic inflammation. The patient died from chronic Bright's disease.

Dr. Pooley said we should never prescribe for patients who complain of severe and persistent cephalalgia until we first examine the urine. This should be the rule of our lives. He also thought Bright's disease an unfortunate name.

Dr. Loving said, a few hours before death several things in this case were important and interesting to him. What was the cause of the extreme itching of the skin? What was the cause of the extreme contraction of the pupils, and what was the cause of the extreme jaundice of the body? The liver showed no disease, and the patient had taken no morphine for twenty-four hours. Could acute or chronic inflammation of the kidney cause these symptoms?

Cancer of Stomach and Liver—Case of Acute Peritonitis.—Dr. Frankenberg presented a pathological specimen of cancer of the stomach and liver, removed from a patient who died in St. Francis Hospital. The entire surface of the stomach was ulcerated, involving the spleen to some extent. The liver was full of nodules. He also presented the kidney of a patient who died of acute peritonitis. The abdomen was very much distended, pus in the abdominal cavity, the peritoneum was inflamed and injected. The appearance of the kidneys was that of what is called the "white kidney." On section it showed fatty degeneration. He also stated that the patient had peculiarities, there being four or five ounces of serum in the pericardium.

Dr. Pooley said the specimens were interesting and instructive. The death of the patient from acute peritonitis—it was not suspected at all—but the post-mortem showed marked peritonitis. The patient died suddenly; he had neither pain nor tenderness. He stated that this is the condition in some cases, especially in those of chronic kidney disease. The peritonitis is provoked by the kidney disease. In such cases, we should be on the look out, especially if there is albuminous urine. He stated that the thermometer might have told what was going on. The suddenness of death was an interesting fact. He thought that a splanchnic shock was the explanation of the sudden death,

In regard to the cancer specimen, he said that there was no persistent vomiting as there generally is in cancer of the stomach alone, and that this was generally so in cases of cancer of stomach and liver. The occurrence of cancer of the stomach and liver he thought a rare event. He then raised the question as to which was the primary lesion.

The subject was further discussed by Drs. Pooley, Reed, Frankenberg, Neil, and Stein.

STATED MEETING, July 6, 1877.

Dr. P. M. Wagenhals, President, in the chair.

Prophylaxis of Cholera Infantum.—Dr. Oleson read a paper on this subject. He gave a short sketch of the disease—stated that it carried off seven-ninths of the infants in the four hot months of the year. The first prophylactic was proper alimentation; the second, protection from excessive heat; and the third prevention of dental irritation.

[The paper was referred to the Editor of the Ohio Medical and Surgical Journal for publication, and appears in this number.]

Dr. Kroesen reported several cases of cholera infantum. He thought improper alimentation the great cause in these cases.

Dr. Loving thought the cause in the main was the hot weather. The disease generally prevails from the middle of June to the middle of September, and it could only be explained on the supposition of the excessive heat. Heat is the main factor—food and dental irritation are secondary causes. He corroborated every word that was said in favor of the bromide of potassium in the paper.

Dr. Oleson said, as mothers were in the habit of giving their infants soothing syrups and cordials and a variety of domestic teas, that it was a far better practice to give them bromide of potassium. He also believed in dental irritation as a cause, and had relieved many children by the practice advocated in his paper.

The subject of proper food for infants, in connection with cholera infantum, was further discussed by Drs. Frankenberg, Oleson, Loving, and Wagenhals.

Selections.

THE RELATIVE VALUE OF COLCHICUM ROOT.—*By Theodore F. Beckert, Ph.G.*—This subject was suggested by several pharmacists, who of late have found it a difficult matter to obtain colchicum root which, on breaking, presented a clear white color. The recently imported article, as obtained from the wholesale druggists, consisted of tubers which had been sliced very irregularly. Out of a one pound lot not less than seven whole tubers were taken, the remainder varying from one-sixth to one-half inch in thickness. These pieces, when broken, presented quite a varied appearance, their color being all shades between white and black; and it was noticed that the lighter colored roots were mostly easy to break, and many of them of a mealy character, whereas the darker ones were difficult to break, and had a somewhat resinous appearance. A quantity of the root was broken piece by piece, and then separated into three grades, according to color, white, slate-colored, and brown or blackish, particular care being taken in the sorting. Upon weighing, it was found that the white root constituted only one-sixth, while the gray root comprised not quite two-sixths, and the black root a little over three-sixths of the article examined. These results also agree with the observations of several resident pharmacists.

The methods used to determine were as follows: Two troy-onces of each of the three grades of roots were exhausted by means of alcohol, yielding in each case about twelve fluidounces of tincture; these tinctures varied in color according to the grade of root used, that from the white root being lightest. This indicates the solubility in the alcohol of the foreign coloring matter present in the gray and black roots. In preparing these tinctures, care was taken to percolate them under as similar circumstances as possible.

The tinctures obtained were separately evaporated by means of a water bath; the residue was treated with distilled water, and poured upon a filter, in order to separate resinous matter; the filtrate was washed with slightly acidulated water until each filtrate measured 100 cc. Dilute sulphuric acid was used for acidulating the solutions, which were volumetrically treated with Mayer's solution, in quantities varying from 5 to 15 cc. In preliminary experiments the solutions were variously diluted, and it was observed that the results were very considerably influenced thereby, an observation previously made by Dragendorff. To serve as a basis for comparison, the experiments were afterwards made with solutions of uniform strength, as stated above, partly without any other addition, and partly as recommended by Dragendorff, after the addition of a concentrated solution of chloride of sodium, to increase the distinctness of the reaction. The three grades of the root required for 1 cc. respectively .0403, .0414 and .0462 of Mayer's solution.

Five troyounces of each of the roots were next exhausted by alcohol, percolation in each case being carried on until the liquid passed tasteless. The alcohol was evaporated, and the residues were treated with water, filtered and precipitated by a solution of tannin. These tannates of the white, gray and black roots, which, after having been dried, weighed respectively .32, .265 and .27 gram, were decomposed by oxide of lead, and then treated with alcohol, in order to separate colchicia. The three alcoholic solutions were carefully evaporated to dryness, then placed over sulphuric acid for several days, and then their weight taken; the product from the gray root weighing .115 gram, the black yielding .104 gram, while root was unfortunately lost.

I next obtained same colchicum root from Professor Maisch, which was not less than ten years old, it having been in his possession at least nine years. It had quite a handsome appearance, very little dark root being present, and in all respects was a much better looking article than that previously employed. Two troyounces of this root were treated as stated above, and an acid solution obtained, measuring 100 cc., and which, when treated with Mayer's test, in a similar manner as before, required .0300 for the precipitation of 1 cc.

The various results thus obtained are more concisely presented in the following table:

	1st grade or white root	2d grade or gray root.	3d grade or black root.	Very old root.
Mayer's solution necessary to precipitate 1 cc. of the solution.......	.0403	.0414	.0492	.0300
Percentage of alkaloid in air-dry root.	.205	.210	.219	.152
Tannate precipitate obtained from five troyounces of root........	.320	.265	.270	
Amount of crude colchicia obtained from the tannates............	lost.	.115	,104	

By the above table it will be seen that the results obtained with tannin and by Mayer's solution do not agree as to the amount of colchicia indicated. This may be due to the slight solubility in water of the tannate of colchicia, as noticed by

Hübler and others, and to the varying amount of water used in the last experiments. But the results seem to indicate that it apparently matters little whether the root has a white, gray or black color, but that the *age* is of primary importance, and none but a fresh-looking root should be purchased; if this is done I think no fault can be found as to the quality of the preparations made from it.

SUPPURATIVE ARTHRITIS FOLLOWING ACUTE RHEUMATISM.—*By V. P. Gibney, M.D.*—The specimen presented is the larger portion of the patella exfoliated from the right knee of a German lad nine years of age, who was admitted to the Hospital for the Ruptured and Crippled, March 8, 1877. The point of especial interest centering in the case is the fact that a rheumatic joint resulted in so profuse a suppuration. For acute rheumatism to often become chronic in the adult is not at all uncommon, for it to become chronic in the child is comparatively rare; but when it assumes a suppurative form, then an unusual interest attaches to the case and thorough analysis is demanded.

Whether the rheumatism in this instance was only one stage of the suppurative arthritis, or whether the rheumatism by its specific influence put the system in a favorable condition for the subsequent arthritis on the slightest provocation, is a question the solution of which I confess my inability to reach, and have accordingly brought it before the members for a full expression of opinion.

The history is as follows:

The boy belongs to a family of eight, only one of whom has died, the cause of this death reported as diphtheria. The family history, paternal and maternal, on a pretty thorough examination, is found unexceptionally good, no hereditary disease being discovered; the hygienic surroundings have been moderately fair; the health during infancy was not good, and a severe attack of pneumonia (from the history given) when he was one and a half years old, was followed within two or three months by a prolonged pertussis. From all these, however, he seemed to recover perfectly, and enjoyed good health uninterruptedly until the beginning of the present year. One day, about the middle of January, he came in from school complaining of a sense of weariness and pains throughout his bones; went to bed feverish, and on the following morning was unable to leave his bed. The joints became painful, began to swell, and within a few days a typical case of acute multiple rheumatic arthritis was present. A physician was in attendance for a week or ten days, convalescence set in, and about eight days after the doctor had discontinued his visits, seventeen days from the invasion, the right knee, which had not up to this time become entirely free from pain and a trifling amount of swelling, suddenly became very much enlarged, violent pain accompanied, and a severe relapse was thought to be imminent. A surgeon was called in, who prescribed rest and evaporating lotions, but spontaneous opening in a few days gave exit to a large quantity of offensive pus. Emaciation became marked, and on presentation at the hospital his condition was that of a patient well-nigh exhausted from some acute disease. He was totally unable to stand alone, the normal contour of the right knee was completely effected, the skin was bluish in appearance, the veins engorged and tortuous, while sloughing had taken place around two openings, leaving ugly ill-conditioned ulcers. Motion was preserved, *i. e.*, to as great an extent as the infiltrated periarhitic tissue would allow; no pain was elicited on a careful attempt to approximate the articular surfaces, the patella was movable, and in view of all the facts I made a diagnosis of periarthritis conseqent on acute rheumatism. The treatment was tonic medication, and simple dressing to the ulcers. I neglected to mention the peculiar expression given to the eyes. Such an expression is difficult to describe, but is just such as one observes in blondes who are decidedly strumous. The case progressed favorably until March 16th, when the swelling increased, the temperature rose to 103½°, and an additional abscess seemed to locate itself in the popliteal space. This was subsequently evacuated, and nothing of special note was observed till April 21st, when an extensive abscess filled the whole anterior portion of the thigh, a curious bone was seen protruding from the ulcer in prepatellary region; this was seized with a pair of dressing forceps, and the specimen now before you was easily removed. An apparatus was applied, the pus being first thoroughly evacuated and stimulants freely added to the tonics already being administered.

There is no question now about the joint being involved, and the course pursued by the disease seems clearly shown by the history as recorded, viz.: a suppurative periarthritis extending into the joint, necrosis, caries, etc.

The boy is at present in a better condition than the severity of the lesion would seem to warrant. The sac or sacs are being washed out twice daily with a solution of acid, carbolic. ʒi.-Oi., new abscesses are opened by incision as soon as they form, the limb is kept in a semi-extended position, and the prognosis on the whole is by no means as grave as it was a week ago.—*Medical Record.*

ATMOSPHERIC INFLUENCES CONTROLLING INEBRIETY.—*By T. D. Crothers, M.D., Superintendent of Walnut Hill, Hartford, Conn.* At the Philadelphia meeting of the Association for the Cure of Inebriates, I reported a curious fact, that periods of great restlessness and irritability so common among inebriates under treatment, seemed to follow the rapid fluctuations of the barometer, and be particularly marked, in low areas of atmospheric depression.

At that time my observations had been confined to a short period, and the statement made seemed to be indicated, although not confirmed, by sufficient evidence. I propose now to state some of the observations which have been noted, as a confirmation of the above statement. All persons who have charge of inebriates and note the progress of the case from day to day, are surprised at the exceedingly variable character of the disorder generally manifested in extremes of physical and mental debility. Noted as either abject invalids, craving for medicine and help, or ignoring all efforts and boasting of conscious strength, accompanied with periods of restlessness and excitement from trivial causes, which come and go rapidly.

These paroxysms seem to appear at all times and pervade all classes of inebriates, from the patient lately arrived and not over the immediate effects of alcohol, to those who have been for months residents of the asylum. My attention was called to the similarity of these paroxysms, and their frequent returns, without any apparent cause.

This led me to note down carefully all the symptoms, which may be described in a general way, as follows: Without premonition or apparent cause the patient becomes restless and exhibits a tendency to boisterous emotional displays. Patients will walk up and down the halls or grounds, or desire to go away on long tramps, without any particular purpose, and laugh loudly and immoderately at trivial things; show great irritability and anger at insignificant objects; or manifest in extreme sensitiveness and complain bitterly of their conditions and surroundings. The appetite seems to decline, and a half defined stage of general depression comes on, attended with an intense longing for medicines of any kind; various neuralgic affections appear, accompanied with pains of all kinds, headaches, dyspepsia, sense of weight and fullness. A degree of recklessness and abandon are manifest, rules and healthy restraint are disregarded, and keen pleasure is apparent in detailing drinking scenes, etc.

In appearance they betray agitation and general nervousness; often the flashing eye and the tremulous lips and muscular movements, betoken the coming storm. The mind is free from delusions, although intensely sensitive, and likely to explode in outbursts of indignation, or appeals of generosity, flying from one extreme to another. The management of such cases during these paroxysms is always difficult, requiring rare tact and judgment. The care and attention must be increased, and not unfrequently all the medical and hygeinic measures are taxed to their utmost. Such attacks usually last from twelve to thirty hours, then subside. Frequently these paroxysms end in drunkenness from liquor introduced into the asylum with the greatest adroitness and cunning.

After recording a number of these instances and trying to eliminate all possible complications and coincidents, I was surprised to notice that they seemed to occur just before or during a storm.

Turning to our barometer, whose readings are recorded three times a day, I found that the time of these paroxysms corresponded to the sudden fluctuations of the atmosphere, particularly a falling barometer and low area of pressure. I directed the observer to note with care the sudden changes and low area of pressure, with temperature, winds, etc. While I recorded carefully all the circumstances and conditions that seemed to enter into these paroxysms, each keeping his record distinct, and not under the observation of the other.

Having recorded twenty instances or paroxysms, similar to that described above, extending over seven months, a comparison of records was made, showing that fourteen of these instances occurred at the time the barometer indicated a very low area of pressure, nearly or about 28.30 inches.

In the six remaining instances there was a steady or changing barometer, the mercury in two cases being on the point of fluctuating either way. In six cases, this low barometer continued eighteen or twenty hours, and in the other cases a much less time. The length of the paroxysms seemed to correspond to this long-continued pressure; also cloudy and threatening storm was marked at some of the times recorded. Paroxysm number twelve in my note book was noted as coming on in the afternoon, and attended with unusual depression, extending to nearly every patient, and manifest in a very marked way, clearing up next day.

The record of the barometer at this time indicated a rapid fall and an unexpected low pressure, with an almost equally sudden rise. The range of the barometer was below 28 inches and rose within eighteen hours to 29.26.

It was found that from four to six hours after the barometer began to fall, or reached its lowest area, these paroxysms commenced. The records of the temperature at these times and the direction of the winds, were not in any way significant. On two occasions a severe thunder storm followed, which was noted in my records by an unusual degree of fault-finding and general disaffection among the patients. I regret that I cannot give a diagram showing the correspondence between these two records, but trust to continue these observations in the future with results more satisfactory. These statements are not presented as conclusive in any way, but rather as hints and suggestions of the possibilities awaiting further investigations.

There is a widespread belief of the influence of the atmosphere over nervous diseases, and superintendents of insane asylums have noted the emotional and other changes appearing in their patients before the occurrence of a storm. Dr. S. Weir Mitchell remarks very clearly as follows: "Apart from these outside conditions of weather which we may conceive of as influencing us by checking or increasing perspiration, and lessening surface pressure, or altering the amount of oxygen inspired and carbonic acid thrown out, there are no doubt personal elements in the equation which are more or less mysterious, and which must be taken to account for a certain number of the neuralgic fits which do not seem to have perfect relations to casual weather states; moreover it is conceivable that as we are changeful instruments, the body may be sometimes more liable to respond by pain to conditions of weather favorable to its production.

"The human economy is arranged by nature to have, as it were, a climate of its own, with very permanent states as to temperature, humidity, electric conditions, and the like; but all of these are subject to variations, some of them natural, and, so to speak, rythmic and chronal; others more or less irregular. As they are part of the functional activities of the body, so do they, if necessary, enter into every consideration of the causation of pain. While, however, we may feel sure that they are thus active, their precise relations to the existence or to the favoring of the birth of pain are too uncertain for us to do more than surmise that they sometimes obscure or interfere with or prevent the positive effects of external climatic states in this direction. Any lowering cause, such as dyspepsia, overwork, and anæmia, however brought about, is apt to increase this sensitiveness to barometric changes; and so every enfeebling agency, as it were, tones a man's nerve up to the capacity of producing pain, when once there exists a permanent cause in the way of neural disease." . . . . .

In an inebriate asylum it is difficult to eliminate all the possible causes which might produce these so-called paroxysms, and limit it to atmospheric influences alone. Inebriates, as a class, are extremely sensitive to all changes of surroundings, and likely to become greatly agitated from the most trifling causes.

The arrival of a patient, very much intoxicated, at the asylum, particularly if he is allowed to stand around and be seen, creates more or less excitement that is dangerous to others, and often awakens diseased cravings for liquor that are incontrollable. At certain times patients will recognize their ill feelings as arising from perverted nutrient desires, and reason clearly about it, seeking relief with earnestness. On other occasions they become secretive and reserved in their manner, exhibiting morbid excitement and want of principle that is abject.

The exercise of wholesome discipline at times creates much sympathetic excitement, and the absence of restraint necessary to check the precipitation of some cases, has the same effect. To eliminate these and other causes, and indicate how far the atmospheric influences control the organism, will require extended observation in many asylums. I have noted several cases where some obscure conditions of the atmosphere, either physical or electrical, seemed to be the exciting cause of inebriety.

In one instance the salt air of the sea shore raises intolerable cravings for liquor; in another, a mountain region and the solitude of the woods, etc.

The influence which I have drawn from these and other observations is that conditions of atmospheric pressure do often exercise a powerful influence over inebriety, and that frequently a change of climate is followed by a lessened desire for stimulants; also it is not improbable that we shall find in the future that certain temperatures, climates, and conditions of the atmosphere are favorable for the continuation of inebriety, or rapid decline, and finally dying away of the disorder.

The influences of climate, changing conditions of weather, winds, fogs, dampness, cold, heat, dense or rarified air, rivers, oceans, soil, and contour of the land, act either to raise or lower the standard of healthy activity; and the reaction of these changes manifest in the nutrient wants, when perverted, constitute the starting point of inebriety.—*Quarterly Journal of Inebriety.*

HÆMOPTYSIS.—*By John L. Cleveland, M.D.*—An individual has pulmonary hemorrhage; the physician is sent for, and in a vast majority of cases, the diagnosis is immediately made out—

phthisis. This idea prevails among the laity, propagated unquestionably by the professional opinion that exists on this point, to such an extent that with them consumption and pulmonary hemorrhage are nearly or quite synonymous; at least, hemorrhage is a sure forerunner of consumption. That this idea is erroneous, there is no doubt, and the physician who makes out a diagnosis of phthisis on this symptom alone, will find himself in error very frequently, perhaps in nearly one-half of his cases.

It is not our design to underestimate the importance of pulmonary hemorrhage or its gravity; we could scarcely do this if we desired, when we have before us the picture of terror and prostration that the hemorrhagic patient usually presents. It is only intended in this paper to treat of hæmoptysis of pulmonary origin. In the majority of cases, these hemorrhages are of bronchial origin, occurring in the smaller and terminal bronchi. In small hemorrhages the blood corpuscles pass through the uninjured capillary walls (diapedesis); large ones by rupture of vessels. Bronchial hemorrhages are not often of traumatic origin. They are caused for the most part by those agents which induce hyperæmia of the mucous membrane, whether the condition be due to increased flow of blood or to passive congestion.

We find them in acute bronchial catarrh accompanied with violent coughing, in whooping-cough, acute pneumonia, scarlet fever, measles, and small-pox. They are produced by the inhalation of irritating gases, by extremes of heat and cold, overexertion of the respirary organs by shouting, or speaking, or singing, or unusual bodily exertion; also, by deposits of tubercle in the mucous membrane, or parenchyma, of the lungs, or by heart disease, especially mitral insufficiency or obstruction. Bronchial hemorrhages, said to result vicariously, belong to this class produced by hyperæmia of the mucous membrane—those that are said to follow the cessation of the menses, or of hemorrhoidal bleeding. The latter, says Hertz, may be certainly ignored, for they exist only in the imagination of certain physicians. He thinks also that the influence of menstrual suppression on this form of hemorrhage should be accepted with a great deal of caution. Trousseau, in his lectures, says there is a class of cases in which the hæmoptysis is the result of what he calls "hemorrhagic deviation." He speaks of women subject to nervous attacks, who spit blood sometimes in considerable quantities, though they are suffering from derangement of the menstrual functions. Attentive examination reveals no disease of the respiratory or circulatory apparatus; the patients do not present any symptoms of cardiac or pulmonary disease, and when they reach the change of life, hæmoptysis ceases, never to return. Some women during pregnancy, and others during the whole time they are nursing, spit blood, the hemorrhage ceasing spontaneously after delivery, or at the end of lactation, as the case may be; nor is it symptomatic of pulmonary tubercle or cardiac disease. Trousseau also speaks of hæmoptysis being physiological to a certain extent, when it takes the place of a natural or accidental sanguineous discharge, which, for some cause, has been prevented from finding an exit by the usual outlets. Thus, in women in whom menstruation is suppressed or irregular, hæmoptysis is one of the most common forms in which hemorrhage occurs as a supplement of the menstrual flux. This, of course, includes hemorrhage supplemental to hemorrhoidal bleedings, which, Hertz says, have no existence except in the imaginations of some physicians. As to the existence of pulmonary hemorrhage as supplementary to menstruation, I am not prepared to deny its existence, but I must say I am skeptical in regard to it. I have never seen a case, though I have frequently heard them affirmed. I am quite convinced that in most of the cases of so-called supplementary hemorrhage, if they could be fully examined into, pathological conditions of the lungs or heart would be found sufficient to account for it. The mere circumstance should call for a close examination. Some of the following conditions would perhaps exist, though the existence of some would be difficult or impossible to prove without a post-mortem examination: Great fragility of the walls of the vessels; tubercles, or the primary elements of phthisis, or certain changes of the lung tissue, as softness and looseness of the parenchyma in consequence of chronic inflammatory conditions; or ulcerative or sloughing processes associated with the cavities of phthisis or bronchiectasis, or gangrene abscesses, or cancer of the lungs, or rupture of small aneurisms in cavities.

Then we have hemorrhagic infarction—a hemorrhage of the pulmonary tissue, confined within narrow limits, and which causes no destruction of the lung tissue. It frequently occurs with pulmonary emphysema and heart disease. "In fifty-nine cases of infarction, Boehdalek found organic disease of the heart in thirty-eight cases." The diagnosis of infarction is generally attended with some difficulty—in many cases it is impossible to arrive at a positive conclusion; and very frequently hemorrhagic infarctions are found in post-mortem examinations where they were not at all suspected. Infarctions of large size accompanied by well-marked symptoms are easily made out. In heart disease, for instance, with a sudden dyspnœa which may threaten suffocation, followed by a cough, with a sputa tinged with blood, with symptoms of circumscribed condensation of the lung, followed sometimes by pneumonia or pleurisy; in such cases we would readily make out infarction. The sputa from infarctions bear a certain resemblance to pneumonic sputa, but they are less tough, are almost always darker, and the expectoration continues much longer than in pneumonia. Finally, we have pulmonary apoplexy, so-called, or more properly, pulmonary rupture, in which the hemorrhage is so rapidly fatal that the physician seldom sees the patient before death, and when he does he is impotent as to any relief. The blood gushes forth in such quantities as sometimes to suffocate suddenly. The collapse is often so profound that the patient dies without coughing up any blood.

Pulmonary hemorrhage, while it may occur at any period of life, is more especially a disease of youth and early manhood. "Since the causes of hemorrhage belong unequally to various ages, the old opinion can rightly be maintained—the head in children, the thorax in youth, and the abdomen in later age most frequently furnish the causes for hemorrhage." (*Wagner.*) The rarity of hæmoptysis in children is worthy of remark. Huttenbrenner says, notwithstanding the destructive processes in the lungs of children, hemorrhage occurs very rarely. According to Vogel, when it occurs it is usually very profuse and is frequently fatal, bloody sputa seldom occurring. Hennock contradicts Vogel, and says bloody sputa are frequently found. Perhaps a reason for the rarity of pulmonary hemorrhage in children is the rarity of cavities in tuberculosis. Gerhardt states that in 265 cases of tuberculosis in children, 77 cavities were found.

Hæmoptysis, or true expectoration of blood, will frequently come on when the individual is apparently in perfect health, the patient being in repose; more frequently while undergoing exertion, without any premonition; sometimes there are prodromata—such as congestion of the head, headache, dizziness, palpitation, a feeling of oppression and thoracic fullness, increased frequency of the pulse, or sweetish, brackish taste in the mouth from spongy gums.

The effect of the hemorrhage upon the patient is usually out of all proportion to the loss of blood; even though the hemorrhage be slight, the patient will labor under great excitement and anxiety, the bravest giving way to terror and apprehension. The face becomes flushed, the pulse quickened, the expression alarmed, and if the hemorrhage is at all copious, prostration comes on, the face is covered with sweat, pulse grows weak, faintness and dimness of vision and ringing of the ears come on; usually they rapidly rally, unless the loss of blood has been very great. It may occur ar intervals, or one attack may be the end of it. For several days after the hemorrhage dark colored clots are raised, which gradually disappear. Every case of considerable hemorrhage that I have had an opportunity of observing has been followed by an increased temperature, varying from 99° to 102°, lasting from 7 to 14 days, usually being gradually reduced to the normal standard. This is in accordance with the opinion advanced by Niemeyer, that the blood in bronchial hemorrhage acts as an irritant to the lung; while in many or in most cases it is expectorated and absorbed, and the patient entirely recovers from any ill effects of the hemorrhage. In some cases, they do not rally, and perish in a few months from a phthisis florida—a galloping consumption; not from tuberculosis in the strict sense of the word, but from a form of consumption of which bronchial hemorrhage is the immediate cause. This is in accordance with the old view that classed hæmoptysis as one of the causes of consumption. This it appears might be true; the fact that hæmoptysis is a consequence of pulmonary disease does not invalidate it. Hertz and Ruehle, however, in Ziemssen, maintain to the contrary.

Relation between pulmonary hemorrhage and phthisis is one of coincidence rather than causation. It is absent in some of the most rapidly fatal cases, and is present in some that progress most slowly. The presence of hemorrhage is only a presumption in favor of phthisis, and it is always that except in rare cases. Niemeyer's views in regard to the relation between bronchial hemorrhage and pulmonary consumption, though not exactly in accordance with some of the more recent authorities, are certainly worthy of careful attention. They are summed up in the following paragraphs:

"Bronchial hemorrhage occurs oftener than is generally believed in persons who are not consumptive at the time of the bleeding, and may never become so.

"Copious bronchial hemorrhage frequently precedes consumption, there being, however, no relation of cause and effect between the hemorrhage and the pulmonary disease. Here both events spring from the same source—from a common predisposition on the part of the patient, both to consumption and bleeding.

"Bronchial bleeding may precede the development of consumption as its cause, the hemorrhage leading to chronic inflammation and destruction of the lung.

"Hemorrhage from the bronchi occurs in the course of established consumption more frequently than it precedes. It sometimes, though rarely, appears where the disease is yet latent.

"When the bronchial hemorrhage takes place during the course of consumption, it may accelerate the fatal issue of the disease, by causing chronic destructive inflammation."

Ruehle explains the fact of the rapidly fatal termination of some cases, that were apparently well up to the time of the hemorrhage, by the statement that large vomicæ sometimes exist, the patient at the same time imagining himself in perfect health, and is so regarded by others. A case of immediately fatal hemorrhage is narrated, where a cavity was found containing the ruptured vessel, and yet no previous symptoms of disease had been noticed. Prognosis of bronchial hemorrhage, so far as any immediate danger is concerned, is almost always favorable. The ultimate effects of hemorrhage will depend upon the quantity, frequency, and the existence of vomicæ.

When vomicæ do exist, hemorrhage always is attended by more or less danger, not so much from bleeding to death, though that does sometimes occur, as from the anæmia and prostration that follow, which may hasten a fatal result.

Profuse hemorrhages always suggest cavities, even though the subject may be in apparent perfect health. Ruehle thinks we have no reason to think that the hemorrhage comes from the bronchi, when it is copious, has never seen a case of this kind, and doubts their occurrence. The size of the cavities bear no direct relation to the copiousness of the hemorrage. Fortunately, hemorrhage is usually self-limiting, from contraction of the muscular coats of vessels; from coagulability; from diminished pressure; from loss of blood, or syncope, or both; from increased flow of lymph from the thoracic duct, due to the loss of blood, thereby increasing coagulability. Hemorrhage from infarctions, while it is of no consequence as hemorrhage, it indicates a condition of the lung that may result in serious inflammatory and degenerative processes; of couse, when the result of pyæmia or metastatic abscesses, it bodes evil. The hemorrhage of pulmonary appoplexy, of course, is always fatal.—*Clinic.*

CLINICAL LECTURE ON A CASE OF POTT'S DISEASE OF THE UPPER CERVICAL VERTEBRÆ.—*By S. W. Gross, M.D., Lecturer on Clinical Surgery at the Jefferson Medical College.—Gentlemen:* You will notice in this girl, who is fifteen years of age, deformity of the nape of the neck, and a peculiarity in the position of the head, which is slightly flexed, advanced forwards, and inclined somewhat to the right side. Her mother states that she detected the swelling four months ago; but I take it for granted that the disease upon which it depends had existed for some months previously. In the morning, when she rises from her bed, she is able to hold the head more nearly in an upright position and has more control over its movements, than later in the day. At this time also the muscles in front of the neck are relaxed. At about noon, she complains of pain, which radiates down the shoulders and arms, and the head is fixed in the constrained and rigid position in which you now see it. Pressure upon the top of the head, rotation, and attempts to extend the head greatly aggravated the pains; but they are much relieved when she goes to bed, although they recur two or three times during the night, awakening her from her sleep. Two months ago, she also suffered from pains which extended as high as the vertex on both sides of the occipital region.

The prominence on the posterior surface of the neck, which is the seat of an unnatural amount of heat, and is tender on pressure, extends from the occiput to the spinous process of the fifth vertebra. There is very slight projection of the separate spines, so that the deformity presents less of an angular appearance than is met with in tubercular disease of the column lower down.

Two weeks ago, this girl's father died of pulmonary phthisis: so that her trouble is a legacy transmitted by her parent. It is a beautiful illustration of Pott's disease, or tubercular disease of the spine, occurring, however, higher in the column than is generally the case, the dorsal region being the one most frequently affected. It would be interesting to determine the existing cause of the affection; but this I have been unable to do, and I can elicit no history of injury. Suppression of the cutaneous perspiration or disorder of the digestive apparatus would be sufficient to produce it, since in this disease there is always a latent spark lodged somewhere in the system, and ready at any moment to be aroused into activity by the slightest cause. I must confess that I belong to the school of pathologists who maintain that no one can have such a disease as this, or any other of those which are termed tubercular or strumous, without there being a predisposition to it.

The first four cervical vertebræ are here involved in strumous inflammation. Such an affection may be simulated by rheumatic or common inflammation of the vertebral ligaments; but in such cases, while pain would result from pressure upon the head, reflected painful sensations would not be experienced in the occipital region, the shoulders, and the arms. The value of reflected, or so-called sympathetic pains, in the diagnosis of the disease, is not sufficiently appreciated by the mass of the profession, and to those of you who feel interested in pursuing this topic, I can earnestly recommend the highly instructive and interesting "Lectures on Rest and Pain," delivered by Mr. John Hilton, an eminent surgeon of London. In cases of tuberculosis of the spine, peripheral pain will almost invariably point out the seat of the lesion weeks before the deformity has established the diagnosis. Hence, when a child is brought to you suffering pain somewhere upon the surface, it should be stripped, and the course of the painful nerve be traced back to its point of emergence from the intervertebral foramen.

In the case before us, one of the earliest symptoms, and one which clearly indicated spinal trouble, was bilateral pain over the occiput, which reached as high as the vertex, and followed the distribution of the great occipital nerves, which are branches of the second cervicals and emerge from the spinal canal between the atlas and axis vertebræ. The bodies of these bones being invaded by inflammation, the nerves in the intervertebral foramen become irritated, and express their irritation by pain which is referred to their peripheral distribution. Subsequently, pain was experienced in the shoulders and arms; and this is readily accounted for when we consider that the lower trunks of the superficial plexus, which are distributed to the tissues over the scapula and clavicle, are involved in the morbid action. You may ask, what has the superficial plexus to do with the pain in the arms? Between the fourth cervical nerve and the fifth cervical nerve, which forms apart of the brachial plexus, there is a communicating branch; and it is along this that the sensation of pain is reflected down the arm.

The pain is relieved at night, or whenever the patient assumes the recumbent posture. During the day, while the girl is moving about and sitting up, the bodies of the carious vertebræ are pressed against one another, as is shown by the flexed and advanced position of the head. The pressure is produced by the weight of the head, and increased by the contraction of the muscles attached to it. The sterno-mastoids are only slightly contracted; but there are a number of others which flex the head and are supplied by branches of the cervical plexus. Two in particular are involved; they are the rectus capitis anticus major, its upper and middle portions, and the longus colli. They arise from the transverse processes and bodies of the cervical vertebræ, and are inserted, one in front of the foramen magnum of the occipital bone, and the other into the tubercle on the anterior arch of the atlas. The weight of the head, pressing on the bodies of the vertebræ, irritates the nerves; the nerves of sensation react on the nerves of motion, and the muscles are stimulated to contraction, thereby causing still greater pressure, and keeping up the pains. A similar effect is produced in coxalgia, where the adductor and pectineus muscles are firmly contracted. When our patient goes to bed, the weight of the head is removed, the irritation of the nerves subsides, and the muscles relax. On rising in the morning, no muscular resistance is offered to the nodding motion of the head, and it can be brought into a nearly vertical position. After two or three hours, however, the weight again stimulates the muscles to contraction, and the flexion and pain recur.

The pains felt at night are due to reflex muscular action. During the day, while the brain is on the alert, the muscles which steady the vertebral column are under the control of the will, and are kept constantly in a contracted state to prevent motion; but during sleep the irritation of the exposed filaments of nerves in the cancelli of the bones is transmitted only to the medulla oblongata, the muscles are involuntarily thrown into contraction, and pain is produced by the inflamed surfaces of bone being brought violently together.

The prominence of the back of the neck is due not only to the absence of the bodies of the vertebræ and the flexed position of the head, but also in part to the projection of the spinous process of the axis vertebra. When the head is flexed the atlas vertebra slides forward, making the axis prominent. The greater part of the swelling is, however, due to the deposition of inflammatory new material between and around the posterior segments of the vertebræ. It is placed there for the purpose of forming a splint to keep the parts at rest. The contraction of the muscles answers the same purpose. Nature is doing her best to cure this girl, but will not entirely succeed, and in her present condition she is in danger. Owing to the softening of the atlas vertebra, the transverse ligament may become torn away by an incautious movement; the odontoid process would then be forced backward into the medulla, and produce sudden death.

There was a time when this disease could have been met so as to have prevented deformity. It should have been attened to when the reflected pains gave warning of the impending mischief, or before there was much destruction of the bones and the intervertebral disks. Then, with proper care, a large amount of the now inevitable distortion could have been avoided. All that we can do in the way of treatment is to check the progress of the disease and prevent further deformity. The patient's hands are cold and clammy, showing that the circulation in the outskirts of the system is imperfect, and her appetite is poor. Hence I shall order her two grains of quinine, fifteen drops of the tincture of the chloride of iron, and five drops of the tincture of nux vomica, to be taken every eight hours, along with a nourishing diet, of which an abundance of fresh milk and bread shall form a prominent feature. With a view to equalizing the circulation, her mother will be instructed to sponge her off with the tepid water every morning, and to follow this by friction with a salt towel, which is made by dipping a towel in a strong solution of common salt and allowing it to dry in the sun.

You need scarcely be told that the further progress of the disease can only be arrested by keeping the parts perfectly at rest and free from pressure. If you have carefully weighed the symptoms, you will have observed that you have only to follow out what nature prompts you to do. When the patient is recumbent, the vertebræ are relieved of the weight of the head, and a night's rest is sufficient to relax the contracted muscles and relieve the pain, which is a source of so much suffering. Hence it must be evident to you that rest in the recumbent posture is imperatively demanded in this case. To make it effectual, the patient should lie on a hair mattress, the head and neck being supported by a small pillow of sand or small grain, either of which will mould itself to the inequalities of the surface; while the movements of the head are still further restrained by short bags of sand placed on each side and reaching from the top of the head to the shoulders. In this position she will be bathed and fed, and pass her excretions, and not be allowed to rise for any purpose whatever. To be of service, recumbency should be strictly enforced, and be prolonged for months if it be necessary, or until such a time as the vertebræ shall have become consolidated by bony material, which will be indicated by freedom from pain on practising the manœuvres which now elicit it.

A common idea, but, according to my experience, a most erroneous one, is that children bear recumbency badly; that they waste, lose their appetites, and not infrequently die, in consequence of their close confinement. Some cases of joint-disease go on from bad to worse under any course of treatment; but I speak advisedly when I say that recumbency causes children, in the majority of instances, to grow fat and strong. It is the pain which induces emaciation and even death; and there is no apparatus with which I am acquainted that entirely relieves pain if the patient be permitted to walk about during the acute stage of the affection. Should, however, it be deemed advisable to give the patient the benefit of fresh air, it may be carried out in a cuirass, which includes the head, made of wire and well padded. So soon as pain is not elicited by pressing upon or rotating the head, the child may be allowed to get on its feet, provided the spine, weakened by disease, be relieved of the weight of the head. For the richer class of patients, the best support is that of Mr. Darrach, of Orange, New Jersey, in which the weight of the suspended head is transferred to the trunk and pelvis by means of a steel rod, attached above to a padded plate which accurately fits the occipital convexity, and below to a plate fixed on a corset made of rawhide. As the corset is moulded on a plaster cast of the body it accurately fits all the inequalities of the surface; and as it is perforated by numerous round openings it is extremely light, while freedom of the respiratory movements is provided for by fastening the corset in front with elastic bands. To the occipital plate is attached a band which runs around the sides and front of the head, and from which another band passes under the chin. In the poorer classes, the gypsum bandage of Dr. Sayre, in the folds of which a support for the head is embraced, answers a most admirable purpose.—*Medical Times.*

THE IMPORTANCE OF CINCO-QUININE AS A REMEDY.—The Supervising General of the Marine Hospital Service has issued a circular letter to the medical officers of that branch of the Treasury in which he calls their attention to the extraordinary increase in the market price of sulphate of quinia, and at the same times alludes to the success attending the employment of the other alkaloids of the bark.

In the year 1866 the Madras Government appointed a Medical Commission to test the respective efficacy in the treatment of fevers of quinine, quinidine, cinchonine, and the remedial value of these four alkaloids as deduced from their experiments is shown by the following statement:

Quinidine	ratio of failure per 1,000 cases	6
Cinchonidine,	" " " " " "	10
Quinine,	" " " " " "	7
Cinchonine,	" " " " " "	23

Cincho-quinine contains all these alkaloids, and the combination has proved more efficacious than any one alone; and the price of this article being less than one-half the present price of the sulphate of quinine, the physicians of this country are substituting it for the sulphate; and the medical officers of the Government service should give this subject due consideration in preparing their requisitions for medical supplies.—*Washington, D. C., Daily Nation, August* 8, 1877.

Editorial.

OPIUM HABIT.

We occasionally receive letters of inquiry from physicians in various parts of the country in regard to opium antidotes. To these, and to all who are interested on this subject, we desire to express our opinion without reserve.

The habit of using opium constantly is certainly one of the most injurious to the subject, of which we have any knowledge, not excepting alcoholic drinks. The mind and body become a wreck from which they are never restored without very great difficulty. The cause of humanity is therefore most effectually served by any succesful plan of relieving these unfortunate sufferers.

Secret nostrums are being sent all over the country in large amount, and at enormous prices, for this purpose. The victims of this habit and of the vender's schemes, eagerly seize upon any promised relief, particularly when shrouded in mystery.

Physicians find great difficulty in controlling such patients in the use of proper means, and sometimes feel constrained to encourage secrecy in order to have them continue the remedy.

Collins and others who have found immense profit in their secret "opium antidote," doubtless use the same article as the principle ingredient in their nostrums. Opium no doubt forms the basis of all, and the cure is effected by *gradual reduction.* Proof of this is found in the fact that gradual reduction carried out as faithfully as the nostrum is taken, proves equally successful; and indeed more speedy in the cure, on account of the slow decrease in quantity which some of the nostrum dealers require. Other neurotics have been detected, and are doubtless added to these nostrums. Strychnine probably enters into all, and quinine perhaps in some. These with opium, some mineral acid, and aniline for coloring, make up the composition of the average "painless opium antidote."

If a practicing physician tells an opium eater that he must gradually decrease the quantity and lengthen the interval between the doses, in order to break up the habit and restore him to usefulness, health and pleasure, he often fails to carry out the plan arranged for him. The advertisement of the charlatan meets his eye, the charm of secrecy lays hold on him, and he pays enormous prices for concealed morphine and strychnine.

What is the duty of physicians, under these circumstances? This is the great question to be answered. Should we encourage the purchase of these humbug preparations, or supinely allow our patient to be thus deceived without an effort to convince him and the public of the deception?

If exposure of this fraud would redound to the pecuniary benefit of the physician alone, of course the public would not be especially interested in becoming enlightened on the subject, but since the greater benefits are to be secured to the unfortunate subjects of the habit, we have no hesitation, as a journalist, in proclaiming the truth on this subject. If our neighbors who are the subjects of this vice can greatly profit by paying us a moderate fee to conduct them out of the difficulty, it is a duty we owe them as well as ourselves, to induce them to take this course.

Exactly what amount of benefit is derived from the addition of strychnine to the preparation of opium used in the process of destroying the habit, is not generally known, but that advantage is obtained from it, and perhaps quinine also, seems now to be very satisfactorily established by those who have tested them in this way.

The plan of some, is to increase the strychnine as the opium is decreased, until an amount of the former as large as the patient can bear without unpleasnat effects, has been arrived at.

We have no doubt that the most inveterate opium eater may be cured of the habit in a few months, by the use of strychnine in this way, and the decrease in quantity and lengthening of interval between the doses of opium.

We have freqently published analyses of nostrum opium antidotes and the reports of cures by the plan above suggested, and shall continue to do so as they are presented. Physicians generally agree on this subject, and we hope the public will soon be informed sufficiently to receive the benefits of advancement in medicine.

OUR department of Society Reports has not for several months past, been as full as usual, owing mainly to the suspension of the meetings of the Academy of Medicine during the summer months. The exercises will, however, be resumed on the first of October, and the proceedings will again appear in our next issue, and be continued regularly as heretofore.

The discussions of other local Societies in this State will hereafter be reported for publication in this journal.

The reports and discussions in Medical Societies tend greatly to professional and scientific advancement, and we have always felt a lively interest in such associations when conducted for this purpose. Correct and faithful reports must be relied on for the establishment of practical facts, and it would be most outrageous in members to make other than strictly correct statements of facts in their reports. One who would vary from this is not only unworthy of membership in societies, but of professional recognition. Of course opinions, inferences, explanations of phenomena, etc., may differ greatly amongst scientific men, but facts cannot be varied, and should always be stated with great care and correctness.

IN MEMORIAM.—It becomes our painful duty to announce the death of Dr. J. F. Bozeman, one of the most intelligent members of the medical profession in Georgia.

Although not actively engaged in the duties of our calling, for several years past, his connection with the local Society of the city, and his free communication with practitioners here, have been most pleasant and profitable. By the state government, as well as the medical profession, his loss will be sadly felt, and his death seriously deplored.

EDITORIAL CORRESPONDENCE.

DALY, TEXAS.

Editor Atlanta Medical and Surgical Journal:

DEAR SIR: I herewith send you a report of the excision of a large fatty tumor, based on the parotid gland, and occupying the whole region round about the angle of the inferior maxilliary bone.

I don't send it for any very peculiar interesting features connected with the tumor, or the operation for its removal, but to add another to the reported operations in which chloroform was used as an anæsthetic and carbolic acid as antiseptic for the dressing. It is true that the connection with arteries of considerable size rendered the operation somewhat difficult, not to say dangerous. The temporal artery and blood-vessels affording nourishment to the adventitious growth —the latter being much enlarged by this service—necessarily gave some embarrassment in the operation.

Antiseptic operations attract some attention of late, perhaps justly so, and it is only by experience that useful facts are well established. Simple cases, therefore, become important to the profession. Anæsthesia by chloroform is, by some surgeons, used with hesitation, owing to unpleasant and even fatal effects in their hands. The danger probably, consists principally in a want of due caution in its use, and if accurate reports were more frequently made, an entirely safe plan might be settled upon.

The patient, a colored woman, about fifty years old, was brought thoroughly under the influence of chloroform, when, assisted by Drs. Smith, Crocket, Dupre, and L. Merriwether, I commenced the operation by making an elliptical incision from the angle of the jaw to the mastoid process. Notwithstanding the care with which the tumor was dissected out from its bed, the temporal and other smaller arteries required ligation. Very little blood was lost, and after bringing the edges of the incision together with sutures, the carbolic dressing was applied, with the effect of preventing undue inflammation, and securing ready union.

Thus the old woman was relived, without suffering or other unpleasant consequences, of a troublesome tumor which had already made impression upon her constitution.

F. L. MERRIWETHER, M.D.

FORT LAMAR, GA., Sept. 13, 1877.

Messrs. Editors Atlanta Medical and Surgical Journal:

Having met with a case recently which I deem an interesting one, I decide to give you a short history of the same, and if you consider it of sufficient importance, you may give it a place in your journal.

The case is a young man, aged twenty-one years, who is suffering from epilepsy, caused by a wound he received while laboring in a field, on January 17, 1869, by the falling of a tree, which struck him on the head and fractured the frontal bone, a knot entering the brain. A physician was sent for, who came, examined the case, but failing to discover the piece of wood, dressed the wound and left. One hundred and thirty-three days from the time of the accident a hard substance was discovered by the father of the young man, near the surface. Drs. Mathews, of Elbert county, Ga., were sent for, and extracted a knot 1½ inches long. Twenty-one days thereafter a piece of a woolen hat and lining was taken from the wound. The depressed bone was soon removed, the wound healing readily. In October, 1871, nearly three years after the injury, and over two years after removal of the foreign substance from the fracture, he was attacked with epilepsy, which has continued to this day.

I saw him August 24, 1877, and remained with him about thirty minutes only, during which time he had six spasms or convulsions. Could an operation for the removal of the depressed bone be of any benefit to him at this late date, eight years after receiving the injury? I would be very glad to hear from any one on this subject.

Yours very truly, I. H. Goss, M.D.

We think the foregoing case is one in which trephining is certainly demanded. The operation has been performed with great benefit when the point of injury to the cranium could not be satisfactorily ascertained, and indeed when the only explanation of relief that could be given was that of counter-irritation or allowing a little more space for the brain. In this case, doubtless a spicula of bone, a piece of wood or other substance in contact with the meninges or brain-substance becomes a source of constant irritation, leading to the convulsions. Notwithstanding the unnatural adhesions that may be expected, and the difficulty and danger of removing the irritating cause, the case certainly requires an attempt at relief by removal of a portion of bone, including the depressed part. In the patient's present condition, he will certainly drag through a miserable and useless existence, and an operation will most assuredly leave him with no darker prospects for future usefulness and pleasure, than surround him at present. Moreover, it would seem unreasonable to expect relief from this most distressing disease from any other means than removal of the local irritating cause, at the same time using brain tonics to break up the habit.—[Editor.

EUROPEAN CORRESPONDENCE.

London, England, July 25th, 1877.

Editors Atlanta Medical and Surgical Journal:

In a series of letters I propose to give you notes and reflections on medical and surgical practice in Europe.

In framing a letter from this little world, the great difficulty is the immense amount of materials at command, so that if we were to wait to complete the round of the hundreds of hospitals, and then arrange the facts accumulated, it is quite doubtful if these communications would ever be written. Therefore, without any attempt at classification, we will note the various facts as they present themselves, and trust to the variety as a compensation for the disorder, and sometimes, perhaps, for the repetition, that will be observed.

OVARIOTOMY

is an operation surrounded with so much interest that it well deserves to be the first object of our attention, and for this we will first look at the in-department of the "Samaritan Free Hospital." As a successful operation, this one is certainly of modern origin, for some years ago, when such cases began to be received into this hospital, the ovarian operation was said to have failed; that is, the patient died, in almost every instance, at the "General Hospitals."

The Medical Superintendent of Guy's Hospital reports that, during the nine years from 1868 to 1876, inclusive, there were eighty-two cases, with thirty-nine recoveries and forty-three deaths—a mortality of 52.42 per cent. A reference to the available reports of three other large hospitals, during nine years, gives sixty-one cases, with twenty-four recoveries and thirty-seven deaths—a mortality of 60.65 per cent. In the Samaritan Hospital, for the same nine years, the mortality is only 24.37 per cent., and, in the year 1876, it has been reduced to 8.99 per cent.—fifty-five cases, with fifty recoveries and only five deaths—the lowest, it is believed, hitherto attained, or anywhere recorded.

Contrast this report with the condition of things some years ago, when, even under special arrangements the operation rarely succeeded, and the fatality, in fact, became so notorious that an inquest was threatened over every fatal case. It must be observed here, that these reports are not partial, as the Samaritan has had two hundred and eighty-one cases during the last nine years, while, for the same period of time, five large hospitals reported only two hundred and fourteen.

The success of this operasion is most desirable, because large ovarian tumors differ in one respect from many other diseases. Without the operation the patient always dies. Should she survive the operation, her restoration is as complete as if she had never been the subject of this terrific malady.

A visitor to the hospital is struck with the great precaution taken to avoid the introduction of any septic poison, each person present at an operation being required to sign a declaration to the effect that, "We, the undersigned, have not attended any post-mortem, nor any dissecting room, nor any case of infectious disease, within the last seven days." If this care is required for the success of this operation, general practitioners must of necessity resign it into the hands of specialists.

There is but one patient in each room, and the operation is performed in the same apartment in which, besides the patient's bed, there is another spare bed, and a couch for the nurse. Each case is provided with one skilled nurse, who never leaves until the end of the treatment.

There was nothing in connection with the operations but what has been described over and over again. Silk-gut was used for the sutures, to close the lower portion of the external wound, and bichloride of methylene was used for anæsthesia.

Two operations were done. One for right ovarian cystic tumor, with suppurating sack, by Dr. G. G. Bantock. In this case the sack was very adherent, and had to be carefully torn away. The pedicle was small, was simply tied and dropped into the abdomen, and a drainage tube inserted. This patient has since died,

The second case, by Mr. J. R. Thornton, was double ovarian, multiple cysts. In this the pedicles were broad and very vascular, and were laced and then dropped in. No drainage tube was used. This case is doing well.

The manner of employing the anæsthetic here, is by forcing a stream of air by means of an india-rubber hand-ball, through the fluid and into the mouth-piece. This plan, although troublesome, does away with the danger of over-administration, as the inhalation of the anæsthetic by the patient requires a positive motion on the part of the physician.

Mr. Spencer Wells, who we have seen operate twice in this hospital, is very sanguine as regards the future of ovariotomy as an operation to be as commonly performed by the general practitioner as any other capital operation—an amputation for example. Of course the opinion of Mr. Wells, as the leading ovariotomist of Europe, if not of the world, carries with it great weight, but it is not shared in by others with whom we have spoken, who regard it as an operation which must ever depend for success on careful sanitary arrangements and skilled nursing, and to this they attribute much of the success of the operation in the Samaritan Hospital, while according every credit to the skill, dexterity, and experience of the surgeons in charge.

It may be well to mention here that in case of the death of a patient *everything* in the room is removed and fumigated, and annually the hospital is closed for three weeks and thoroughly cleansed and purified.

At the Lock Hospital, for women, there are about a hundred and fifty patients, but little of novelty was presented. The mercurial treatment is employed, and inunction fully used. A patient was shown who was being treated by subcutaneous injection, and for this purpose a new preparation is under trial; it is a solution of mercurial bichloride in peptine. It is said not to precipitate, and not to cause abscesses when used hypodermically. It certainly has not produced any unpleasant effect in the patient brought forward, who had been injected daily for several days.

For eczema a new remedy, "Tong Pang Chou," is on trial. It is employed externally; but the name is not very prepossessing.

Dr. Sayre, of New York, is here, demonstrating the application of his "Plaster of Paris Cuirass," for spinal diseases. Doubtless your readers are already acquainted with the principles involved in its use, and will receive it as a great convenience to themselves, and a priceless boon to the thousands afflicted with this class of complaints.

At "King's College Hospital," after extirpating a couple of epitheliomatous tumors, Mr. Wood was kind enough to show a very interesting case of aneurism treated by electrolysis, on a new plan. After numerous trials on other cases, with not very satisfactory results, Mr. Wood conceived the idea that motion of the blood through the vessel hindered its coagulation, on the same principle that running water freezes with difficulty, and that by compression above and below the aneurism, shortly before and during the application of the galvanic current, a perfect coagulum could be produced.

The case under treatment was aneurism of the right iliac and right femoral arteries. Other means being tried without success, there remained only a choice between tying the common iliac and electrolysis, and the use of the latter was determined on. Pressure was then made above and below the tumors until pulsation ceased, needles were inserted, and a current from sixty cells passed. The effect is described as almost magical, being the complete obliteration of the vessel, so thorough, indeed, that sphacelation of the leg resulted and amputation had to be performed. The patient is doing well.

MANCHESTER, ENGLAND, August 11, 1877.

A week spent at the meeting of the British Medical Association has been most instructive; not that the discussions were any more scientific, the subjects more lucidly explained, the conclusions more logical, or the discoveries more novel, than would be found at our own association.

England teaches from our text-books, uses our instruments, adopts our treatment, praises our doctors, but says they shall not practice within her borders. Free trade is her motto, but she does not apply the principle to physic. Yet, when within a year her neighbor, France proposed to adopt the English maxim, and allow only French doctors to practice in France, England was the first to make an outcry, and the matter was even deemed of so much importance as to be brought before her parliament. Surely this is a question which might well be taken up by the International Medical Congress, to the end that some uniformity of education, and of professional recognition might be brought about, or at least placed within the reach of the medical men of each country, without entailing on them the necessity of traveling over the world, and spending a lifetime and a fortune, preparing for and passing examinations, according to the individual requirements of each school by which they desire recognition.

The address on medicine, of Wm. Roberts, M.D., F.R.S., on "The Doctrine of the Contagium Vivum and its Applications to Medicine," was very practical, and a resume will not be uninteresting.

The speaker pointed out the close resemblance between a contagious fever and the fermentation produced by yeast. He also showed another form of fermentation produced in hay infusion inoculated with "bacillus subtilis," a bacterium very common in vegetable infusions, and in curdling milk. This bacillus subtilis and the yeast plant may be taken as representatives of a class of organisms which are grouped together under the general designation of *saprophytes*, which is intended to include under one head all the organisms connected with the decomposition and decay of organic matter The first proposition he set himself to prove was "that organic matter has no inherent power of generating bacteria, and no inherent power of passing into decomposition;" the second, "that bacteria are the actual agents of decomposition;" the third, "that the organisms, which appear as if spontaneously in decomposing fluids, owe their origin exclusively to parent germs derived from surrounding media."

To support these propositions he brought forward three sets of preparations of organic mixtures and liquids, all of them in bottles, the necks of which were closed by plugs of cotton wool, which protected the contents from the dust of the air, but left it freely open to its gaseous elements.

The first set had been rendered sterile, by the prolonged application of the heat of boiling water. The second had been filtered through unglazed earthenware. The third set consisted of fluids, such as blood, urine, pus, etc., which had been simply removed from the interior of the living body, and transferred, with proper precautions, with the glass vessels previously purified. All these had been in the possession of the speaker for months, many of them for years. They had all been exposed to conditions the most favorable for decomposition, but none of them showed the least change.

Much of the confusion which has hitherto surrounded this subject has arisen from ignorance of the high degree of heat which the spores of these organisms could endure without having their vitality destroyed. For example, it has been found that while the living "septic monads" are killed by a heat of 140 degrees, Fahrenheit, the spores of one variety, which are so minute as to be invisible to the highest microscopic powers, except when they exist in masses, are capable of germinating after being subjected to a heat of 300 degrees, Fahrenheit, for ten minutes; and here the speaker made a truly pertinent remark, to the effect that the abioginist must not look among the saprophytes in hopes of finding an example of spontaneous generation. Looking at the order of life as it now exists on the earth, it may be described as beginning with a chlorophyll body, and ending with a saprophyte. The office of the chlorophyll body being to form organic compounds from inorganic matter, while the action of saprophyte is one of progressive disintegration, and finally a breaking up of all the organic compounds it contains into carbonic acid and ammonia.

The main object of this address appears to be to assert the truth of the doctrine of a contagium vivum, and the coclusion that that contagium consists of an independent organism or parasite. As examples to sustain this position, three diseases were selected, viz: septicæmia, relapsing fever, and splenic fever; and it was shown that septic bacteria are the cause of septicæmia, sporilla the cause of relapsing fever, and the bacillus anthracis the cause of splenic fever. Yet this bacillus anthracis is identical in appearance with the bacillus subtilis seen as a ferment in the hay infusion, the one a harmless saprophyte, the other a deadly contagium. This change might be the result of the laws of variation known to exist in the animal and vegetable kingdoms, and which apply in a curiously exact manner to many of the phenomena of contagious diseases. Parallel instances may be found in the bitter almond as a sport from the sweet almond, the nectarine from the peach, diphtheria from scarlet fever, etc. Again, the history of cholera epidemics looks as if the cholera virus were an occasional sport from some Indian saprophyte, which, by variation, has acquired a parasitic habit, and having run through countless generations, either dies out or reverts to its original type; and so with typhoid fever as a sport from some saprophyte common to our sewers.

Pathophytes, as these pathogenic organisms have been termed, are, as far as our present knowledge extends, all to be found in that group of fungi called *bacteria*. Now, fungi present a marked tendency to take on a parasitic habit, and some of them have a special fermentive action. In some diseases, as septicæmia for example, both these processes may play a part, the ferment pervading and deorganizing the system, and then the organisms feed upon the dead or decaying tissues.

Such is the gist of this very able discourse, but it would be going too far to say that this settled the question in favor of "contagium vivum;" doubtless among the audience were many who, while appreciating the marked ability of the address, differed "in toto" from the deductions. It is to be regretted that no discussion of the subject took place, as the record of the opinion of the many observers assembled on that occasion would have been most interesting and instructive. R. J. NUNN, M.D.

BIBLIOGRAPHICAL.

MICRO-PHOTOGRAPHS IN HISTOLOGY—Normal and Pathological. By Carl Seiler, M.D., in conjunction with J. Gibbons Hunt, M.D., and Joseph G. Richardson, M.D. Philadelphia, 1877.

This is the ninth number of the first volume of this very estimable publication. We find in it, first, a magnified photograph of a section of lung tissue; and considering the difficulty of accurately defining, in a photograph, a distinct representation of this tissue, we think the work has been creditably performed. Three other plates are embraced in this issue—sections of tubercular lung.

THE following pamphlets have been received:

ALCOHOL AS A FOOD AND MEDICINE. A paper from the Transactions of the International Medical Congress, at Philadelphia, 1876. By Ezra M. Hunt, A.M., M.D., President of the Section of American Medical Association on State Medicine and Public Hygiene, etc.

REPORT ON THE SURGICAL HISTORY OF MISSISSIPPI. By W. W. Hall, M.D. Grenada, Miss., 1877.

MEDICAL ORGANIZATIONS AND THEIR VALUE. An address delivered before the Alumni Association of Jefferson Medical College, March 9, 1877. By Wm. B. Atkinson, M.D.

MCDOWELL MEDICAL COLLEGE—Sixth Annual Session, 1877.

Address by the President, E. H. Luckett, M.D., of Owensboro, Ky. Read at Madisonville, Ky., May 9, 1877.

CALCULI FOUND IN THE BLADDER—After the Cure of Vesico-Vaginal Fistula. By Henry F. Campbell, M.D., Augusta, Ga. Reprint from Vol. 1 Gynæcological Transactions, 1876.

PNEUMATIC SELF-REPLACEMENT OF GRAVID AND NON-GRAVID UTERUS. By Henry F. Campbell, Augusta, Ga. Reprint from Vol. 1 Gynæcological Transactions, 1876.

HISTORY OF A CASE OF RECURRING SARCOMATOUS TUMOR OF THE ORBIT IN A CHILD—Extirpated for the third time, and ultimately causing the death of the patient. By Thomas Hay, M.D. Philadelphia. Illustrated. 1877.

TWO CASES OF MORPHŒA—With remarks on the disease and its differential diagnosis. By L. Duncan Bulkley, A.M., M.D., Physician to the Skin Department, Demilt Dispensary, New York, etc. G. P. Putnam & Sons. 1877.

DEFECTS OF HEARING AND OTHER EVILS—The Result of Hypertrophied Tonsils, etc. By A. W. Calhoun, M.D., Professor of Diseases of the Eye and Ear and Clinical Ophthalmology and Otology, in the Atlanta Medical College. H. H. Dickson, Atlanta, Ga., 1877.

ON THE NOMENCLATURE AND CLASSIFICATION OF DISEASES OF THE SKIN. By L. Duncan Bulkley, A.M., M.D., Physician to the Skin Department, Demilt Dispensary, New York, etc. G. P. Putnam & Sons. 1877.

NAPHEY'S THERAPEUTICS.—A new edition (fifth) soon to be published, will consist of two volumes of 600 pages each, viz: 1. Medical Therapeutics; 2. Surgical Therapeutics.

INTRA-UTERINE PESSARIES.—A reply to "A Plea for Woman," in the *Louisville Medical News*, of May 26, 1877. By V. H. Taliaferro, M.D., Professor of Obstetrics and Diseases of Women, in the Atlanta Medical College, etc. 1877.

INAUGURAL DISSERTATION ON TETANUS, ETC.—For the Degree of Doctor of Medicine and Surgery, in Frederick William University of Berlin, August 15, 1877. By Henry F. Scott, M.D., of Atlanta, Ga.

EXCERPTA.

Death After Chloroform.—An inquest was recently held in Dawlish, Eng., touching the death of Sarah Crudge, æt. twenty-three years, who died suddenly soon after an operation for squint, and after chloroform had been administered. Deceased was thoroughly examined by Mr. Cann, the operator, and considered a fit subject for anæsthesia. Four drachms of chloroform were inhaled. After the operation deceased spoke to him and appeared perfectly right; she then fell into a sleep, her pulse being quiet and regular. In two and a half hours afterwards she was dead. The immediate cause of death was found to be effusion of blood on the brain.—*Med. Record.*

The Plaster-Paris Jacket appears to take very well, not only with the profession, but the public. Its adjustment before an audience is so easily made, and the demonstration of its usefulness so impressive, that it has found great favor with many surgeons who are lecturers and teachers. The outside public also appreciate such exhibitions. We wonder how Prof. Sayre will feel to read in a Buffalo newspaper that a surgeon of that place invited a reporter to be present at such an exhibition, and also to read a description of the operation in the said papers. But why not educate the public in these matters, and confine the treatment of such cases to hospital surgeons rather than to ordinary quacks.—*Ibid.*

How to Demonstrate the Presence of Carbonic Oxide in the Air of a Room.—According to Prof. Bottcher, a solution of chloride of palladium is a good reagent for carbonic oxide and carburetted hydrogen. Strips of linen or cotton soaked in a concentrated solution, as free from acid as possible, of this substance, assume an intensely black color when brought into contact with the above-named gases.—*Ibid.*

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INHALATION OF IODINE IN ASTHMA.

BY J. G. WESTMORELAND, M.D., ATLANTA, GA.

The disease known by the name which heads this article has engaged the attention of pathologists for a long time, and still the exact condition of the organs concerned, is an unsettled question. The truth is, the prominent symptom giving origin to the name, is the result of various and very different pathological conditions. Difficult or laborious breathing of a particular kind is called asthmatic, while dyspnœa is the term applied to difficult or obstructed breathing from mechanical or other cause, not exhibiting the peculiarities of asthma. Literally, both terms alike denote imperfect respiration, and it is only by custom that they are made to designate different forms or varieties of laborious breathing. Asthmatic breathing is characterized by a wheezing sound, audible at a distance from the subject, bronchial mucous or soft sibilant rale, loose cough, with sometimes copious mucous expectoration. It is distinguished from dyspnœa caused by hydrothorax or other cause lessening the capacity of the chest, by the dry cough, dry, sibilant rale, and almost entire want of expectoration, in the latter.

The generally recognized condition in asthma is that of bronchial spasmodic contraction, but quite a diversity of opinion exists touching the direct cause of the contraction. One says it is the result of accidental irritating cause, operating on the bronchial mucous membrane, and extending to the muscular tissue, in a subject predisposed to spasm of the bronchial muscles; others think the moving cause exists in the nervous system, and that the derangement is first felt in the nervous centers; while others, again, conclude that reflex nervous impression on the bronchial muscles from local irritation in the mucous membrane is the only reasonable explanation.

Asthmatic trouble is always paroxysmal, and the attacks occur most frequently at night, leaving the patient, in many instances, comparatively free from suffering during the daytime. Some subjects of the disease have annual attacks, at a particular season, and exhibit decided evidences of constant irritation of the nasal mucous membrane. In such cases, coryza is the first symptom observed in the attack, and exists for several days before the paroxysms of difficult breathing appear. This form of the disease is known to the public by the name, "hay fever," or "hay asthma," when occurring at commencement of autumn, and "rose fever," when it comes on in the spring. Persons subject to this annual attack, particularly those in which it occurs about the last of summer, are generally free from all the symptoms of asthma during the whole year, except the month of September. In this form, local irritation, and in most instances, subacute inflammation of the respiratory mucous membrane exists throughout the bronchial and nasal passages, and yet, while the coryza is constantly present, difficult respiration occurs only occasionally, as in ordinary asthma.

Reasoning from analogy, we infer that we have a constant local irritation, or subacute inflammation, as the foundation of ALL forms of asthmatic spells. The opinion that the paroxysms of bad breathing are immediately produced by reflex nervous impression, in asthma of any kind, we think is fully sustained by fair and legitimate reasoning on the subject. The paroxysmal character of all reflex impressions leads us readily to suspect such influence to exist whenever periodicity is found in disease, without evidences of primary lesion of a nervous center. Particularly is this the case when irritation or inflammation is detected in a neighboring organ to that in which the paroxysmal manifestations are found. Sometimes the diseased organ exhibits reflex derangement, and even organs remote from the local lesion, have their functions disturbed in this way. Familiar examples are found in the development of tetanus by local irritation in the extremity of the body; hysterical pulmonary, cardiac, gastric, or uterine functional derangement, from uterine irritation; convulsions as the result of enteric trouble, etc. Bronchial irritation from exposure to cold in certain constitutions, may lead to functional disturbance of the respiratory tubes in the form of paroxysmal spasm, such as is found in a fit of asthma. Thus derangement of the respiratory organs is manifested in spasmodic contraction of the muscular coat of the bronchia from irritation of the mucous surface.

With this opinion of its pathology, we, some years ago, determined to test the effects of direct applications to the respiratory mucous membrane in asthma. Accordingly, about the first of September, for a case of "hay fever," the inhalation of iodine was advised. The subject, a lady of thirty-five years old and the mother of four children, had suffered regularly with the disease during the whole month of September, for a number of years. With the view of preventing the annual return she had taken daily about ten grains of quinine for a week. As usual, however, the symptoms were fully developed by the first, and the treatment was commenced about the fifth of September. One-fourth grain of morphine was given, and in an hour one grain of iodine was inhaled, by placing the remedy in a wide-mouthed small vial, sufficiently heated to change it into fumes, and inhaling through the nostrils. Notwithstanding the anodyne effect of the opiate, an unpleasant paroxysm of cough was produced, leaving the patient much relieved from the coryza and dyspnœa, however, during the succeeding twelve hours. The inhalation was repeated every twenty-four hours for several days, and afterwards less frequently for two weeks, with the effect of preventing any decided asthmatic paroxysms, during the night or day, as had been her habit.

Some bronchial and nasal trouble continued for three weeks, but such decided relief was afforded that the lady is delighted with the prospect of being rid, in future, of this distressing and unwelcome annual visitor.

More recently, a case of the same general character came under my observation, but had advanced so far towards the time of its spontaneous termination that no certain and decided results can be claimed. The inhalation of iodine was had daily, however, and followed by complete relief from the usual nightly paroxysms of asthma.

Patients suffering from this disease, and their physicians, generally feel disinclined to embarrass the already difficult breathing with the means proposed above, but my experience in the use of iodine inhalations, not only in asthma, but in the treatment of ordinary chronic bronchitis, catarrh, etc., justifies the opinion that no fears need be had of producing injurious effects; and by preparing the patient with an opiate an hour previous to the inhalation, the unpleasant cough attending it is measurably prevented.

This is the only local alterative or catheretic remedy that can be readily applied to the bronchial mucous membrane, and this the only form in which iodine can be inhaled in sufficient degree of concentration to relieve chronic disease permanently.

A CASE OF STRICTURE OF THE URETHRA COMPLICATED WITH HYPERTROPHY OF THE PROSTATE, STONE, AND VIOLENT CYSTITIS.

BY SHIRLEY BRAGG, M.D., ATLANTA, GA.

On August 24th, shortly after an operation (external urethrotomy) I was called in consultation by my friend, Dr. R., of this city, to see Mr. F., (aged 60) who, to all appearances, was suffering only from a violent attack of cystitis, with a constant desire to urinate, and the unpleasant symptoms accompanying any inflammatory action of the vesical neck.

The Doctor had tried the usual remedies which promise most relief, and, finding his patient no better, urged upon him the necessity of an examination, to which, finally, he consented. Accordingly his diuretic was continued with an enema of starch and tr. opii, forty drops to the ounce, to quiet the constant tenesmus.

The following evening, I determined to examine him carefully, expecting to find some enlargement of the prostate, which, in one of his temperament, is not infrequent. The urethra was first explored, and found to be exceedingly irritable, though normal, so far as the bulb. At this juncture a stricture was perceptible, not, however, of small calibre. After satisfying myself as to this point, the prostate was carefully examined, through the rectum. As anticipated, I found a very great enlargement of that organ. In fact, so far as could be judged from a sense of touch, the whole bladder seemed to be indurated. After consultation, Dr. R. and myself determined to relieve the strictured urethra, not by rapid divulsion, but gently stretching the parts with divulsor. The enema was still kept up, and after passing the night more quietly than had been his custom to do, was seemingly better. He was now kept quiet in bed. Quinia and ferri administered, with a generous diet.

A few days later, finding him passing so little water, and with such difficulty, I determined to introduce the catheter gently, drawing off what residue there was, and washing out the bladder. This was found to give great relief, so much, indeed, that I concluded to continue it daily, using simply warm water, at first, then a solution of bi-borate sodæ. In the mean time beef-wine and iron had been ordered to fortify his system as much as possible. From the first introduction of the catheter, stone was suspected, for, upon removal of this instrument, I could always perceive, as it were, a grating in one particular spot. Taking the condition of the patient into consideration, the length of time he had been affected, it was patent to my mind that further surgical interference was to be avoided if possible. Upon sounding, carefully, the stone was found to occupy, seemingly, the left side. This led me to believe that, perhaps, it was partially incisted; so, with the consent of the patient, I called on my friend, Dr. O., of this city. Our views coincided as to its presence and position. By this time he was rapidly losing strength, though, to outside appearances, his cystitis was better. Looking carefully to everything, only one conclusion could be arrived at; i. e., should we operate with a bare chance, or quietly wait for what a few days would surely bring forth—death?

Explaining to him and his family his critical condition, an operation was submitted to, which, at best, was a speculative chance. He was much emaciated and extremely weak; in fact, stimulants were being administered freely. There being no time to lose, a slight laxative was ordered, to clear the lower bowel, and the operation performed the following morning, in the presence of Drs. Owen, Logan, Roach, Lee, and Messrs. Johnson and Gordon, students, Dr. Lee kindly administering the anæsthetic. Though very feeble, the pulse improved under its influence, and in a few minutes all was ready for the operation. The staff being introduced, I proceeded to do the lateral operation, making my incision into the prostate as small as possible, leaving the rest to dilatation. A few moments more, and my finger glided over the staff into the bladder, giving me control of that organ. I was now somewhat amazed to find no stone, but upon pressure above the pelvis with my disengaged hand my finger readily came in contact with it. Withdrawing the staff and introducing the forceps along my finger as a guide, I slowly extracted a calculous, undoubtedly of uric acid, measuring about 1¼ inches in length, and 1 inch in breadth. The bladder was further explored, cleansed, and the patient returned to bed. Hemorrhage was very slight, and, upon arousing from the effects of chloroform, expressed himself as feeling comfortable. A few minutes later, a severe rigor came on, from which, however, he shortly recovered. He was now put on opium and kept perfectly quiet. That night he rested well, but I found him next morning with some fever and a tense bladder. Complained of not being able to get rid of his water, and, to relieve his troubles in this direction, we agreed to draw it. That evening found him much better than was expected, having rested quietly.

Monday morning (the following day) was not so well, though cheerful. Stimulants were ordered. Later, in the evening, he was evidently sinking, and urine had passed freely. The wound, with the exception of a peculiar dryness, was doing well as could have been expected.

The following morning showed plainly that all our efforts had been in vain, and that night he quietly succumbed, not from septicæmia, pyemia, infiltration, or other concomitant diseases, but simply from exhaustion brought on from long suffering, and a shattered constitution.

NEPHRITIC COLIC.

By FERDINAND KING, M.D., ATLANTA, GA.

I have recently attended a severe case of the above trouble, to which I wish to call the attention of the medical profession, on account of the successful result of the treatment, which, I must confess, was "accidental." The course pursued in the case I here report, may be familiar to some members of the profession, but I have not been able to find it in any text-book at my command.

I was called at one o'clock on the morning of May 10, 1877, to see Mr. O. A., a confectioner, on Marietta street, in this city, who, the messenger informed me, had been suffering since early in the night "with cramp colic." On reaching his apartment, I found the patient resting on his knees and elbows, in which position he expressed himself as being most comfortable, though the pain was constantly present, and confined to one side. It was of a sharp, lancinating character, beginning in the left lumbar region, and extending down through the left inguinal region, and along the spermatic cord to the left testicle. I at once decided that the case was one of *nephritic colic*, which is simply the result of the passage of a renal calculous, along the ureter, from the kidney to the bladder. Besides the pain referred to, the usual symptoms of disuria and increased frequency of micturition were also observed. At times, following intervals of short duration during which he was comparatively free from suffering, he was seized with the most intense pain, which he compared to the thought of being cut by a very dull knife. He was also suffering from extreme nausea, making strenuous efforts to vomit, but without success. I forgot to mention that the attack came on very suddenly, while the patient was attending a concert in the evening.

Morphine, subcutaneously, was the first remedy that suggested itself to me, but, as I had failed to provide myself with a suitable syringe before leaving my office, I was forced to adopt another form of administering the anodyne; so I gave half a grain of the salt in a teaspoonful of water, but it was immediately rejected by the stomach, which seemed to be in an extremely irritable condition. Thinking it necessary to improve that organ, by the use of an emetic, I gave my patient about thirty grains of ipecac. in half-glassful of cold water. To my utter surprise and astonishment, the medicine did not vomit him, dor did it even increase the nausea already present, but, on the other hand, it relieved the pain, as well as nausea, and the patient soon fell into a quiet, gentle sleep, that lasted about three quarters of an hour. On awaking, there was a recurrence of the pain, but of decidedly less severity. I then administered another thirty grains of ipecac., which again brought almost immediate relief, and a sleep that lasted two hours. As it was now about day-light, I gave him the third and last dose of ipecac.—thirty grains—making in all *ninety grains* of the drug. After this, he slept quietly until ten o'clock, when he awoke entirely free from pain, but very much prostrated. As he was badly constipated, the next object was to open his bowels. Having attended the gentleman in former troubles, (though of a different character) and knowing how difficult it was to accomplish this, I anticipated no cathartic effect from the large quantity of ipecac. I had given him, so I gave him four fluid ounces of cathartic elixir, which operated very copiously in the course of two hours.

During the remainder of the day he voided about a normal quantity of urine, which was of extremely high color, and slightly tinged with blood. I directed that it should be carefully preserved, so that I might find the "gravel," or renal calculus, when it came away. Late in the afternoon, I found in the bottom of the vessel in which the urine had been kept, a small calculus, which was mostly uric in its character, though the external covering, which was very rough, must have been of an ammonio-phosphatic character, as it soon crumbled off after exposure to the atmosphere, leaving only a small globular body, not more than half line in diameter.

Now, I would like very much to know the *modus operandi* by which the ipecac. so effectually relieved the patient. As I had given it for the purpose of cleaning out the stomach, so that another remedy might be borne, the discovery was, as before stated, purely accidental. Was the relief the result of relaxation or revulsion? Or, was it from some unknown property resident in this valuable therapeutic agent? I would also like to know why the large quantity of the drug administered did not produce vomiting? The patient has since informed me that he had suffered from similar attacks before, but none so severe as the one just related. Said he never experienced more sudden and decided relief from taking any medicine in his life.

I hope my professional brethren will give the remedy a trial and report results.

BOTANY—IN ITS RELATIONS WITH MEDICINE—No. 1.

BY W. T. GRANT, M.D., ATLANTA, GA.

Some years since, I published several articles on the subject of botany in connection with medicine, but left it incomplete. I now resume my pen, although I cannot be sure that I can yet say all that I should like in advocacy of the more general study of the science of botany by the profession.

It is told that the Pope of Rome at one time said that he was determined that the devil should not have all the good music, and he at once adopted a number of secular airs, and thereby greatly improved the church music. In a similar spirit we should say that the botanics and eclectics, and other wandering sheep of the medical fold, shall not appropriate to themselves the entire field of botany.

By-the-by, this illustration is not exactly appropriate, as when the Pope adopted secular music, he was, in fact, appropriating to his use something which did not belong to him; whereas, in our case, we are but claiming back our own property, which these naughty brethren have stolen and are trying to make a claim to. The fields and forests were originally, and in the early times, the only source from which the profession of medicine drew its material supplies with which to combat disease. And it by no means follows that, because chemistry offered us a large additional supply of medicines which were accepted, that we thereby gave up our claim upon the fields and forests. By no means. Yet it would seem that some think so, as these erring brethren, the botanics and eclectics, have taken possession of this source, and while attempting to set up house for themselves, seem disposed to warn us off *their* provinces, and call us "mineral doctors," etc., etc.

The entire kingdoms of nature belong to us of right—the animal, the vegetable and the mineral; and we reject nothing whatever that will aid in conquering disease. Hence, I am disposed to denominate ourselves as *all*-opathics, instead of alopathics.

In the articles above mentioned, I took the position that *every plant had some one character, or combination of characters, which would indicate the fact that it possessed medicinal virtues*, and that by means of the same or other similar characters, it would be possible to tell at sight what virtue it possessed—whether emetics, cathartics, or any other. After elucidating this proposition, I then insisted that there were not careful observers enough in the fields taking notes. These special characters or indices by which we were to determine the medicinal value of plants, are not now known, but will have yet to be sought for and determined. And while we have excellent and superior advantages, as well as fine botanists, we can never attain this desirable end until the two are combined in one. If every physician was also a practical botanist, no one could predict the immense advance which in a few years would be made. I therefore urge that every medical college should have a chair of botany, for training the students in this branch. I do not mean that this should be a mere appendage to the chair of materia medica, but a separate and distinct professorship. It would not occupy any more time, and very soon after the course begun, I venture the assertion that the interest which the study would develop, would far more than compensate the students for the additional application needed. I am quite sure that the exceptions would be quite rare among students for them to think it any added labor. After they have mastered the elements (which, with a competent teacher,) would be a small matter, they would pursue the study with increasing pleasure, and the result would be that every physician who left your schools would be but another observer in the field, ready and anxious to correct old errors, ascertain new facts, and forward the interests of his profession.

How many physicians are there now in Georgia who can take any of the medical journals of the day and tell whether the plants therein recommended grow in his vicinity? The botanical names are a "sealed book" to nine-tenths of them, and if they should want to use any plant thus recommended, they would probably send a distance for it, although it might be abundant at their doors.

The science of chemistry has been assiduously cultivated by competent men for the past quarter of a century, and as a result, we have a large number of new compounds and preparations introduced to our notice as valuable remedies. If the same attention was given to botany, a like consequence would result. The resources of our forests are unknown, and are almost illimitable. Even with the limited knowledge which I possess of the subject, I believe that I can go into the woods of Georgia and get plants with which I can produce almost any given or desirable effect. The true sequence of matters should be, botany to point out the plant, and then for chemistry to determine its active principles. Botany should lead, but there are no botanists.

The maruta cotula is reputed to possess superior virtues in vesical complaints; but it is not used, because very few know that the weed, which grows by millions over the land, in every nook and corner, and commonly called mayweed, is the maruta cotula. The same may be said of the daucus pucillus; also of salvia lyrate, and a host of other plants which grow all over the country. I believe that I could cover two pages of this journal with simply the *names* of valuable medicinal plants, which are to be found within the limits of our State. And even of the older and better known plants, how many physicians would be able to recognize them? We have quite a number among us. Podophyllum, peltatum, datura strammonium, chimaphila, maculata, the gentians, the lobelias and many others, are our near neighbors, and we have scarcely to do more than reach forth our hand to get them fresh and pure.

I had a thought, some time since, of making a collection of our medical plants, and then prepare an essay, giving briefly their various virtues. I then expected to read the essay before some medical society, and exhibit each plant as an account was given of it, but circumstances interrupted the execution of my plan.

I think that there is a rich vein of wealth that will yield good returns, in what is called domestic practice, in which nothing but plants is ever used by the good old matrons of the land. But none need delve here except the medical botanist. Many valuable remedies are now buried under their common or domestic names, which, if examined by the botanist, could take their true and proper place. By ascertaining its proper name, its various relations are at once seen, and a reason can be easily found why it should be valuable.

I am not, in any sense, a botanist, and I only insist that botany should be taught in our schools, because I know so well what great benefit will result. It will then put this branch of our materia medica on a par with chemistry.

I may be allowed to say that the botanic school have done but little to advance our knowledge of the vegetable kingdom, but the Eclectics are making good progress. Of course it will require time to sift out the really valuable remedies from their legion of panaceas, but that will not detract from the merit of any really valuable discoveries they may make.

IS BROMIDE POTASS. AND SULPH. MORPHIA AN ANTIDOTE FOR POISONING BY STRYCHNINE?

BY J. T. MOORE, M.D., CAIRO, GA.

I was called to a case of strychnine poison a few years ago, in the person of Mr. F., a very prominent citizen, living near the dividing line between Georgia and Florida.

He had for several years been subject to attacks of cramp colic, and had been advised by his physician to take morphine to relieve the pains, at the time of which I am writing. He had a very severe attack at night, and called for the morphine. His wife, in her haste and fright, gave him strychnine, and he did not discover the mistake until on rising from bed and attempting to go to the hearth to vomit, (the morphine having nauseated his stomach,) his legs gave way under him—in other words, were paralyzed. The strychnine had been taken at four o'clock, A.M., and I was called at six, A.M. I found him in all the agonies of mind and body that strychnine could produce. His greeting to me was: "Doctor, I have but a few minutes to live." I began treatment by giving:

℞. Brom. potass . . . . . . ʒj

Sulph. morphia, ... gr. ss M.

This I repeated every half hour until I had given two grains of morphine. I then diminished the dose and increased the interval to an hour, giving about one-eighth of a grain of morphine to eight or ten grains of potass. By one o'clock, P.M., I thought him safe from the strychnine, but fearing gastric derangement, I gave him the following:

℞.—Calomel, ... gr. xii.

Pulv. Dover,

Pulv. Ipecac, aa. . . . . . gr. vj.

M. Divide in vi. powders.

Sig.—one every three hours. Give castor oil four hours after the last powder has been taken.

I called to see him the following morning, and found him with some fever. The medicine had not acted, and I continued the above prescription. At twelve o'clock he had a very large action, passing a large quantity of grape seed, and the fever began subsiding immediately. He passed a comfortable night, resting well. In the morning he was entirely clear of fever, and was dismissed.

I did not give an emetic in the above case, because I thought the poison had been taken up by the absorbents and distributed through the system. The paralysis of the limbs furnished sufficient evidence of the fact, and, consequently, I thought it would be valuable time lost to attempt to produce emesis.

INTRODUCTORY LECTURE TO THE COURSE OF 1877-8 IN ATLANTA MEDICAL COLLEGE.

BY J. G. WESTMORELAND, M.D., ATLANTA, GA.

Gentlemen of the Medical Class :

By the appointment of my confreres it becomes my pleasing duty to welcome you to these halls.

Annually, for about twenty-two years, except, herhaps, three or four years during the war, I have met here the votaries of science, and have always felt a lively interest in their efforts to master the healing art.

To-day, young gentlemen, my anxiety in your behalf is equal to that on any former occasion of this kind, and whenever it becomes my lot to engage your attention, be assured, the teaching shall consist of practical facts, which are to serve you in after life during your professional career, and I feel warranted in promising the same for my colleagues, during the ensuing course of lectures.

It is usual for addresses delivered on occasions like this, to consist principally of the history of medicine and a notice of its prominent founders. Such names as Galen, Bell, Harvey and even that of our ideal father, Æsculapius, afford generally the theme of introductory lectures. It is usual, also, to devote more attention to the literary aspect of such productions, than to the number and arrangement of useful and practical facts. A fascinating display of rhetoric and elocution captivates the hearer who seeks nothing more solid and profitable, and indeed all are pleased with perfection in these respects, however devoid of precepts and principles which are to direct our wandering footsteps in future. Hence the care with which sentences are rounded and classical words selected to adorn public addresses, describing the literary curiosities of past ages.

My purpose, to-day, however, is different. I do not intend to speak of what has been done in medicine, but shall call your attention to the duties of the present and future, and, I hope, in a manner to be understood.

While we look back with pride and gratitude upon the grand discoveries of which members of the profession and the public are happy beneficiaries to-day, we must consider the duties of the hour much more important practically, and feel that they should particularly engage our attention, now.

To you who are preparing for the active duties of our calling, a few general thoughts on the obligations and relations which exist between members of the medical profession and the public, and the importance of correct habits of thought and action, are more appropriate and useful. I have selected, therefore, for my subject on this occasion, *The Medical Profession.*

Few avocations afford less certainty of affluence than ours, and none are more intimately connected with the cause of humanity. Although medical men rarely become rich by the legitimate results of professional labor, they never fail to secure a competency, by the exercise of industry and ordinary frugality. Indeed, opulence is likely to interfere with our regular medical duties, for the attention necessary to preserve a large estate precludes the possibility of professional service to the public. Moreover, the sordid inclinations of him whose heart is fixed on money, are not in unison with the cause of beneficence.

None of the learned professions are intended exclusively for the accumulation of wealth. They are made honorable by their intimate connection with the public interest; and while the "laborer is worthy of his hire," and the honorarium which custom has fixed for their support is amply sufficient to meet all legitimate wants, their ambition is not by any means limited to the acquisition of riches. Proficiency in science brings comfort, joy, happiness to our race, and honor, renown and glory—which money cannot buy—upon the head of those who bestow such blessings.

The world looks upon physicians as the benefactors of mankind, and the misdeeds of charlatans and unprincipled members of the profession only tend to brighten the jeweled wreath on the brow of the truly honorable and upright medical man.

Our obligations to the public are sacred, and when conscientiously fulfilled, serve as inseparable ties, inspiring the hearts of mankind with perpetual admiration. Talk not to me of laws to compel respect from the public and the fulfillment of reciprocal obligations. Human statutes tend rather to weaken that sublime connection wrought by nature, and cemented by philanthropy and science.

The family circle knows no secret that is not confided to the honorable physician. He is the adviser in sickness and trouble, the umpire in domestic dissentions. His is the sacred duty, and to him is awarded the honor of protecting the family, aye, whole communities, from the ravages of epidemics, by the direction which none other can give to public sanitary police.

Notwithstanding this, Georgians must recognize the humiliating fact, that while individuals may appreciate these gratuitous services, the legislative department of this State demands tribute of the self-sacrificing physician, for the poor privilege of serving the public without pay. His charities are rewarded by a tax of ten dollars by the State, and authority for municipal governments to levy fifteen more. We are also insulted in the reason given for this outrage upon our purse, with the statement that protection by the commonwealth in the right to practice our profession justifies the special tax. Insult upon injury! The legal requirement by which the practitioner must give evidence of medical proficiency, serves to protect the public against incompetent physicians, instead of protecting the medical profession.

If, therefore, the people are recipients of benefit from the licensing of physicians, they should of course pay the tax instead of medical men. Not only so, but the discrimination made in the collecting laws of Georgia, against physicians, shows injustice also in the law-making power toward us, and a want of appreciation of the public benefits derived from medical science. These things should not be. A righteous public and an injured profession should see to it that justice be done.

Ours is a mission not less responsible than that intended for the spiritual welfare of mankind. The divine law is complete, and requires only to be made known in its already perfected state, while the science of medicine is imperfect and progressive, requiring thought and judgment in its exercises, for the preservation of life. In order to fill this great mission certain qualities are highly necessary, and the faculty of exercising common sense should have a place at the head of the list. A bombastic display of high sounding technical terms and impracticable theories, betrays a want of solid worth, and makes an unfavorable impression on intelligent people. Occasionally a shallow pate estimates proficiency by unusual expressions, which he does not understand, but remember, gentlemen, that all sensible persons like to understand what you say. Particularly is this necessary in our connection with legal investigations. The statements of medical men made before courts and juries are sometimes indispensable to the ends of justice, and the legal rights of individuals; and in order to the accomplishment of these, the evidence afforded must be understood by the arbiters.

Upon the formation of proper habits, perhaps, more than all else, depends our success in life. The adage, "habit is second nature," should never grow so old as to be lost sight of, nor become so common as to be disregarded. Good and bad practices are alike somewhat uncontrollable when indulged in for a number of years. Excepting immoral habits, none are more damaging to future prospect of success than indolence—*laziness*. This includes neglect of studies, a want of promptness and punctuality; in a word, disinclination to perform our duties generally.

It is true that some are constitutionally opposed to work, and require a greater amount of effort than others; but by the proper exercise of WILL, all may attain to reasonable success. The divine injunction to "mortify the deeds of the flesh," must, in order to success, be practiced in every pursuit of life. We must often act in opposition to our natural inclinations, being directed by judgment rather than taste. Persistance in this course of self-denial forms correct habits, and so changes our natural inclinations as to make duty pleasant and life's journey comparatively easy.

Our intercourse with the public requires, above all things, punctuality. Nothing is more conducive to professional confidence, than systematic engagements and their prompt fulfillment. Indulge not the thought of postponing the time of engagements, however unimportant they may be. It is by neglect of this that a habit is formed embarrassing to our prospects through life, without years of effort to overcome it. Particularly in your pupilage, young gentlemen, let system and time direct your movements, and when you grow older you will not likely depart from these good rules. One minute's failure to be on time rasps the conscience of the truly punctual. Let not the charge of fastidiousness, by your loose associates, deter you from the practice of this important virtue.

You who have not already done so, should now form your habits for life—habits of systematic industry and promptness. Make it a rule of life not to defer till to-morrow what you know should be done to-day. Much of the trouble and hardships which otherwise come upon us, may be thus avoided; and success often depends upon the observance of this simple precept.

Excuse me for thus urging you to cultivate these traits of character, which may be considered of minor importance by some, but which really lie at the foundation of success.

A great misfortune, not so much to the profession of medicine as to the public, is found in the existence of charlatanry and humbuggery, as practiced by the various sects of quacks claiming connection with the body medical. These insatiate parasites prey not so much upon the body to which they try to adhere, as upon the public, whom they deceive and rob. Some of this horde are backsliders from honorable medicine, having received the degree, and in open violation of their obligations and sacred professional honor, have prostituted all to the unholy cause of charlatantry. Others "climb up some other way," as "thieves and robbers," assuming before their intended victims the insignia of authority without ever having attained to that distinction by a knowledge of medical science; while others again find success in the sale of nostrums, without any title at all, by the liberal advertisement of bogus miraculous cures. All, however, are styled Doctors by the dupes of their pretended skill. All have a supposed connection with the medical profession, and by this, lower the dignity and respectability of our calling. In this way, and this alone, are we the sufferers.

The cases, of which for a time we are deprived by these pretenders, in the main are made to require longer and more remunerative treatment at our hands, owing to the delay thus had by the use of nostrums. If, therefore, we seek to make money at the cost of human suffering, we should never raise our voice against charlatans and nostrum dealers. No, the victims of advertising schemes are the injured parties, being deluded by an array of certificates, fictitious and otherwise, bearing the names of clergymen and statesmen as ignorant of medicine as themselves, and when advised by their family physician against listening to the insinuating wiles of the quack, the caution is often attributed to selfishness on his part, and therefore disregarded.

Now, gentlemen, in the name and in behalf of these, our citizens present to-day, and in the name of our people generally, I again, in conclusion, bid you welcome—not only to these halls of science, but to the society and hospitalities of the city.

You come amongst us as strangers, but we hope, after your brief sojourn, we will part with you as friends worthy of our confidence and respect. I am happy to say that, unlike some other places in which the study of our profession is prosecuted, medical students in Atlanta are not looked upon as outlaws and vagabonds, but as gentlemen entitled to respect. Like all other classes of society, however, occasionally one of immoral habits so conducts himself as to forfeit the respect of all good people; but it is our experience that the same number of men collected from any other business in life, will show an equal, if not greater, proportion given to vice than is usually found in the classes of this college. I can see no reason why this class before me should prove an exception to the general rule; and should one go astray and prove himself given to loose and indolent habits, the whole class, as is often the case in other cities, will not be put under the ban on account of one having erred, who belongs to the same body and is engaged in the same pursuit.

Yes, gentlemen, you are received cordially into social relations with our people, and with a firm confidence that nothing will occur to disturb these relations during your stay in the city.

As welcome sojourners amongst us, you are cordially invited to participate in religious worship at any of our churches, and in the social amusements we enjoy. As students of our grand old profession, we cheerfully grant you every facility, both public and private, to qualify you for its responsible duties.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

J. S. TODD, M.D., REPORTER.

ATLANTA, GA., Oct. 2, 1877.

V. H. Taliaferro, M.D., President, in the Chair.

Dr. Logan spoke generally on the use of graduated short cloth tents for the cure of uterine flexions and contracted cervices. His experience, though limited, and of short character, impressed him favorably with their value as remedial agents for the above disorders. He does not regard medication of the tent as at all necessary to overcome mechanical lesion, but should there be need for intra-uterine medication, he knows of no better mode of local application to the cavity of the cervix uteri; the tent being short, just goes within the internal os.

To Dr. Taliaferro is due the credit of the introduction of the cloth tent to the profession, but, so for as he was aware, this modification and special use of this tent was original with himself.

Dr. Taliaferro asked Dr. Logan what he thought was the *modus operandi* in the cure of flexions.

Dr. Logan said he thought it acted both mechanically and as a stimulant to the parts, thereby increasing nutrition, etc. In some cases he keeps in the same tent three or four days. After removing, he allows twelve hours to elapse before inserting another. He places no restriction on exercise while they are worn. Thinks they can be worn where the sea-tangle or sponge tent cannot; in fact prefers them, and has never seen a case where they caused any local disturbance. He spoke of a case of dysmenorrhœa, dependent on contraction of the os, which was entirely relieved during the period following its application.

Dr. Armstrong had also used the tents recommended by Dr. T., with very happy results, in four cases uncomplicated with displacement. One case, that of a lady æt. 32, who had had no children for ten years. He found her bed-ridden, emaciated, etc., the uterus enlarged and congested, with catarrh; tender over the region of the ovaries. The use of the tent, medicated with iodine, for two months, resulted in the reestablishment of regular monthly periods and her entire recovery.

Dr. Taliaferro said he had relieved many bad cases of flexions with the tents. Dr. L.'s philosophy of cure he thought correct, for when the flexions resulted from fatty degeneration the stimulation afforded by the tent was highly desirable, and could not fail to do good. Dysmenorrhœa dependent on congestion was often permanently cured, but where stenosis was the cause, gratifying temporary results would ensue, but would not be permanent, for the cause—stenosis—was sure to recur in a few months.

Dr. W. F. Westmoreland to-day saw the case reported in April, of stricture with rupture of the urethra, causing infiltration, sloughing of scrotum and the tunica albuginia on one side to the crura, etc. The testes are now covered with true skin, nature having drawn it from perineum, thighs, and the regions thereabout. The bulb of the urethra, through which he still urinates, is exposed. There has not been, since the rupture, nor can there ever again be, another erection, for the erectal tissue has been irreparably injured in the corpus cavernosa.

Dr. W. also reported two cases of cystic tumors. One occurred in an old woman, in the recto-vaginal septum. The symptoms were inability to pass urine, great difficulty in emptying bowels. Vagina and pelvis filled with the tumor. On puncturing the tumor, a quart of sanguinous fluid, clearer towards the last, and finally milky, was passed. It refilled, and has been discharged by puncture, two or three times since. The patient is too old and weak for active treatment—palliation alone being admissable. The other case a woman of thirty or forty, who is the mother of several children, has a tumor in the urethro-vaginal septum as large as a hen's egg. There were difficulty and pain in passing water, and to introduce the catheter the point had to be turned toward the symphisis pubis to enter the bladder. The variability in the size of the tumor and the absence of any connection with the bladder led him to infer (as was afterwards proved correctly) that it had a connection with the urethra, which fact was revealed by patient and diligent use of the probe. The contents were mixed pus and decomposed urine. Treatment: he extended the urethra by incisions into the cyst; true, it made a large meatus, large enough to introduce your thumb; but had he punctured through the vagina, a fistula would have been the result. The relief has been as permanent as it was sudden. The cavity, in a week or ten days has greatly contracted, and of the final favorable result he has no doubt.

Adjourned.

ATLANTA, GA., October 9, 1877.

Dr. W. F. Westmoreland reported a case of necrosis of superior and inferior maxilla, in the person of a lady, who, for seven or eight years past, has suffered greatly. He recently operated for the removal of the diseased bone. He found the necrosed bone encysted in new bone. He removed two pieces at two operations. The necrosed bone was very heavy and dense, more like stone than osseous tissue. He commenced the operation by an incision through the skin, on the left side of the inferior maxilla—an orifice only large enough to admit a surgeon's probe was found penetrating the new formation. It was through this orifice, that more or less matter had constantly discharged for years. By means of a chisel, the new bone was removed sufficiently to allow the necrosed portions to be taken away. On the opposite side he operated upon the superior maxilla through the mouth—making no external incision. The sequestra were removed by means of a strong knife and bone forceps. Has seen a great many cases of necrosis and new osseous formation, but never before met with a case like this. He proposes to make other operations at other points in the future.

Dr. Fitts, of Carrollton, who was present by invitation, presented his own case, and requested the opinion of the Academy. Dr. F. stated that, about the first of January, 1875, a hard scale appeared on the back of his right hand. He attempted to scrape it off with his knife, but the pain was such that he desisted.

It continued to grow, and in a few weeks resembled a "seed wart." He pulled out fifty or sixty small bodies from it, resembling small, hard seed—hence the name—in the course of a few months. It continued to grow until it attained a size of one and a quarter inches in diameter, and an elevation of half an inch. Last March it was cut out by his partner, but it speedily returned, and is now as large as ever. It presents a small abraded point on the surface, from which pus and sebaceous matter is occasionally discharged.

It is excessively painful. The pain is sharp and lancinating. He has not slept all night for twenty months, on account of it, except for a few days after its removal last spring, when it was free from pain. What is it, and what course of treatment should be pursued?

Dr. W. F. Westmoreland arrived at the conclusion that the growth was epithelioma. He was impressed with this idea from the character of the first growth, and its recurrence after removal It does not now present all the characteristics of epithelioma, but it will not be long before the history is complete. It will become malignant, and if not removed will cost the Doctor his life. It should be done thoroughly. It was not completely removed at the first operation.

. For this case prefers caustic. It is a slow process, more tedious, but more effectual, than the knife, in that locality. It is impossible to say to what extent the surrounding tissue is implicated. Recommended the anhidrous sulphate of zinc. Has observed that it destroys diseased tissue with little effect upon the surrounding healthy structure. He applies a paste with glycerine as long as it will cause a slough.

Has recently treated fifteen or twenty cases by this means, in situations where the knife would have been inadmissible, with complete success. A remarkable fact in connection with this mode of treatment, is the very small scar that remains after healing. He accounted for its discrimination between sound and diseased tissues, on the ground that the latter were of lower vitality and do not so effectually resist the action of the remedy. When this caustic is used, it is frequently omitted too soon. Its application should be repeated again and again, if necessary, until it fails to produce a slough. This is an important point to bear in mind. Its application is frequently attended with intense pain for an hour or two. This may be prevented, or greatly lessened, by the local use of carbolic acid, the anæsthetic properties of which were first brought to his attention by Dr. Doughty, of Augusta.

The acid itself, if applied pure to the skin, will produce great pain. His plan is to commence by using one part of the acid to twenty of water, then half and half, and as the sensibility is thus gradually benumbed, the full strength, when it is required, may be safely employed, and, finally the caustic may be applied without fear of causing excessive suffering, and, in many cases, no pain whatever. It is necessary that the surface should be abraded, or scarified, before the caustic will act.

Dr. Logan alluded to Sir James Y. Simpson's praise of the anhydrous sulphate of zinc as a caustic, and his positive assertion that it would always discriminate between the healthy and diseased parts. It has yielded, always, splendid success in his hands. He referred to a case of epithelioma of the nose treated by this means, about eighteen months ago, with satisfactory results.

Dr. Jas. F. Alexander spoke of its action on a warty excrescence upon the nose, under his observation. The paste was applied upon a piece of adhesive plaster. It was allowed to remain for two or three days. It was then removed, and the ulcer which remained speedily healed, and left no perceptible cicatrix.

Adjourned.

ACTION OF THE ATLANTA ACADEMY OF MEDICINE UPON THE DEATH OF DR JAMES F. BOZEMAN.

Atlanta, Ga., Oct. 16, 1877.

Academy met. President, Dr. V. H. Taliaferro, in the Chair.

The Committee appointed to draft resolutions expressive of the feelings of members on the death of Dr. Bozeman reported as follows:

Your Committee respectfully submit the following report:

It is with deep regret that we record the death of one of our honorary members, Dr. James Fort Bozeman, of this city, which sad event occurred on the 10th of September last, after a very brief illness. The deceased was born May 16, 1824, in the city of Milledgeville, Ga., received his collegiate education at Oglethorpe University, and graduated from the Medical Department of the University of Pennsylvania, in 1846. The following year he commenced the practice of his profession, at Columbus, Ga., but, in 1849, was appointed Assistant Surgeon in the United States army, and was ordered to duty in Mexico, with the Georgia Mounted Volunteers. At the close of the Mexican war, Dr. Bozeman returned to Columbus, resumed his private practice, and continued it until 1862, when ill health compelled him to retire from the duties of his profession. In 1866 they were, however, resumed, but again abandoned, for the same reason, in a few months. He removed to Atlanta, in 1871, and again returned to his profession, but after a year, owing to feeble health, it was permanently abandoned.

From that period to the time of his death, Dr. Bozeman was engaged in financial operations.

For several years previous to this he was President of the Georgia Home Insurance Company, of Columbus, of which city he was at one time Mayor.

He was, at the time of his death, President of the Board of Trustees of the State Insane Asylum, Director of the Central and other railroads, and Financial Agent of the State of Georgia.

Varied as were his professional and public services, the deceased has left behind him a record for faithfulness in the discharge of duty that should commend itself to all who desire to attain and deserve positions of honor and usefulness.

Dr. Bozeman held no public or private trust, assumed no obligation during his long and active career that was ever betrayed, or discharged without credit to himself. His last public service was an able and unanswerable defense of his native State from the base charge of having repudiated a portion of her just obligations.

In view, therefore, of his private worth, professional acquirements and public services, it is hereby—

Resolved, That, in the death of Dr. Jas. F. Bozeman, society, the church, the medical profession, and the State, have lost a valued, an honored and eminently useful man, whose private and public career is worthy of emulation.

Resolved, That the Atlanta Academy of Medicine, of which the deceased was an honorary member, while deploring its own loss, extend to the bereaved family the most sincere sympathy in their deep and sudden affliction.

J. P. LOGAN, M.D.,
W. S. ARMSTRONG, M.D.,
J. S. TODD, M.D.,
Committee.

The report was unanimously adopted, and, on motion, was ordered spread upon the minutes of the Academy, and the Secretary was instructed to send a copy to the family of the deceased, and to furnish a copy each to the ATLANTA MEDICAL

AND SURGICAL JOURNAL and the Atlanta *Constitution* for publication.

V. H. TALIAFERRO, M.D., *President.*

JAS. B. BAIRD, M.D., *Secretary.*

TOLEDO MEDICAL ASSOCIATION.

Meeting of August 17th, 1877.

Cyrus A. Kirkley, M.D., in the chair. C. S. Chamberlin, Secretary.

Dr. Hathaway, the regular essayist, presented a paper "*On Some of the Therapeutic Phases of Bowel Complaints.*"

Dr. Ridenour remarked on the importance of indigestion as an element in cholera infantum, even in the adult a short attack of acute enteritis will arrest this function for several days.

Dr. Reed asked what his treatment would be in cases of young children with constant watery green cheesy discharges.

Dr. R. replied, small doses of mercury.

Dr. Hathaway, in reply to the discussion, remarked that he had not given ipecac. in homeopathic doses, but sufficient doses to cause emesis, at first, and afterward in small doses, when tolerance had become established. When there is much mucus in the discharges, gives aloes; if acid, he combines alkalies. Is impressed with the necessity of observing the condition of the superficial capilaries; belladonna is beneficial by stimulating this circulation, and thus curing the bowel trouble. Digestion is always affected by bowel troubles, even in dysentery.

Dr. Jones reported the case of a lady aged 32, affected with tuberculosis, who early last spring had hectic, and died last week. The case was remarkable for the emaciation, which was out of all proportion to the local lesion. Even for three months before death her features were pinched. The post-mortem revealed the mesentery studded with large glands, the size of a pigeon's egg, and less, (the specimens exhibited). There was no pain, tympanitis or inflammation of the abdomen, pointing to their existence. The lungs were also involved.

Dr. Thorn remarked on the firm union existing between the pleura. She had had great indigestion for years; so much so that lesion of the stomach was suspected. Some dysentery also existed; eroding ulcers were found in the colon.

Dr. Chamberlin referred to a case of a young lady, who although eating heartily, steadily emaciated and died. The case reported throws much light on such cases.

Dr. Thorn reported case of abdominal drôpsy in a young man at the St. Vincent's Hospital. Examination found impeded heart action. He tapped him and drew 36 pints, and two days after 6 pints more. He is now filling again.

Dr. Cherry saw the patient early in his sickness. Jaundice existed at that time. He strongly suspected liver disease, probably malignant.

Dr. Reed objected to early tapping in ascites, and reported a case where the condition seemed hopeless, which got well on quinia and iron, with large doses of comp. jalap powder.

Dr. Ridenour reported a case where gas was mistaken for fluid, and dry tapping was performed.

Dr. Jones believed tapping cures more frequently than other means.

Dr. Curry remarked on elaterium often curing after every other remedy fails.

Dr. Thorn replied that he regarded the liver of this patient as being diseased.

Dr. Reed reported case of scalp tumor on new born child delivered by a midwife. Showed evidence of suppuration. It was evacuated, broken down blood being freely discharged. Subsequently, the sublingual glands enlarged and discharged. Child died on the twelfth day.

Dr. Forbes remarked that if the scalp tumor had not been opened, there would have been no subsequent septicæmia.

Dr. Waddel reported case of lady aged 38, who was taken with a slight pain in the abdomen, gradually increasing until it became, after several days, very severe. Near the umbilicus an indurated space could be felt. Iodine tinc. was freely applied, and "Glyconated Emulsion of Cod Liver Oil" given internally. The patient soon recovered. Diagnosis was somewhat obscure, but it was regarded as mesenteric trouble.

Dr. Collimore reported case of poisoning by bitter apple, taken for the purpose of causing abortion. The infusion of a whole apple was taken at night. It first caused drastic, soon running into bloody discharges from the bowels, then vomiting and dyspnœa. In 24 hours after taking, at which time he first saw the young woman, the breathing was very difficult, no tenderness of the abdomen, and little change in the pulse. Opium was freely given, but the vomiting did not cease for 24 hours after. He had observed three other cases of poisoning from this drug, but none so severe.

Dr. Chamberlin reported case of remarkable umbilical hemorrhage preceded by a pustular eruption on the palms of the hands and soles of the feet, a few days after birth. It nursed well for several days. The bleeding was finally arrested by passing a surgical needle through the cord and applying figure 8. Blood then began to flow from pustules until death. In thirty years' practice he has seen three cases of excessive umbilical hemorrhage, one of which died.

Meeting adjourned.

PROCEEDINGS OF THE CINCINNATI ACADEMY OF MEDICINE.

Case of Pyelitis.—Dr. Kemper exhibited some pathological specimens, and said: These specimens are from a case of pyelitis of four years'standing. The only cause of the disease that I could discover is the uric acid diathesis. The symptoms of the disease took their rise almost imperceptibly. The urine was full of uric acid crystals during the four months I had charge of the case. There is no history of stone in the kidney or bladder. My judgment is that the uric acid crystals originated the suppurating nephritis in the left kidney. The inflammation extended to the ureter and bladder. The base of the bladder and a circle about the orifice of the left ureter are strongly marked by chronic inflammation. The left ureter is greatly hypertrophied, and its caliber diminished. The sigmoid flexure of the colon is fat and hypertrophied, and adherent to the ureter, and just behind this adhesion the ureter was adherent to the sheath of the psoas muscle. Just above this point is an irregularly-shaped sac, made out of the dilation of the ureter and sheath of the psoas muscle, the fibers of which are beginning to be infiltrated with pus. The pyramidal structure of the kidney is entirely destroyed, and the cortical portion nearly so. The right kidney and ureter are healthy, but enlarged from prolonged increased activity. At the antopsy the abdominal cavity was filled with pus, and the peritoneum and intestines softened by inflammation.

The course of the disease seems to have been this: The inflammation in the kidney extended to the ureter, and from that to the sigmoid flexure of the colon and the psoas muscle. The pressure of these two parts upon the ureter caused its diminished caliber to to be easily clogged by a uric acid crystal or a drop of pus. The clogging, repeated from time to time, created the sac. A residue of pus in the sac worked its way downwards and backwards into the sheath of the psoas muscle, forming a large abscess. A stoppage of the ureter caused the sac to fold so as to distend its walls. A brisk natural action of the bowels occurring under these circumstances caused a slight rupture of the frail adhesions between the ureter and sheath of the psoas muscle. Pus escaped into the abdominal cavity, and death was speedy and inevitable.

Dr. Longworth remarked, the general appearance of the specimen would seem to indicate tubercular disease of the kidney.

Dr. Kemper replied that there was no clinical history of tubercle in any other organ; and there never had been tubercular disease in the family. The right kidney was healthy. In tubercular pyelitis both kidneys are generally affected. Tubercle does not select the kidney by preference, and there is no clinical history of any determining cause that would satisfy us that tubercle had in this case departed from its invariable habit.

A Case of Meningeal Rheumatism.—Dr. McMechan reported the following case: On September 21st, 1877, Joseph Plaspohl, aged 14 years, was taken with a hard chill, which lasted about an hour. Fever followed the chill, and most intense pain in the right hip joint and in the head, accompanied the fever; vomiting took place quite frequently on the first day of the disease. On the second day of the attack I was called, and found the temperature 105°, the pulse 120, and the vomiting still continuing. The pupils were dilated; the patient was delirious most of the time, and the delirium was so intense at night, that he had to be held in bed; the bowels were constipated, and the pain in the head was quite severe, but not so intense as that in the hip joint. Salicylic acid and morphine were ordered for the patient internally, and ice-water was applied to the head. On the third day of the disease the vomiting ceased, but the pupils still remained dilated, and the pain in the head and in the hip joint was just as severe as at first. The delirium continued. The temperature was 103½°, and the pulse 130. Bromide of potassium in thirty-grain doses every four hours was given, but failed to control the delirium in the slightest degree. Drs. Harp and Kane were called in consultation. On the sixth day of the disease, and on the fifth day of the treatment, and until within three hours of expiring, he still complained of pain in the head, most excruciating pain in the right hip joint, and was still delirious. The other symptoms previously described also remained as severe as at the beginning of the treatment. The diagnosis of the case was meningeal rheumatism. Niemeyer, in his work on the Practice of Medicine, reports a case of this disease in the following words, viz: "I myself have only seen one case where the moderate increase of bodily temperature, the delirium in the first stage, and the subsequent coma, together with excessive retardation of the pulse and repeated vomiting, left no doubt as to the nature of the disease." He also says: "In a dissertation written by Dr. Flamm, under the direction of my colleague, Koehler, on 'Meningeal Symptoms in Acute Rheumatism,' cases are reported where *post-mortem* examination showed the presence of inflammatory disease of the meninges. The *Allgemeine Medizinische Central-Zeitung*, No. 58, 1877, contains a very interesting article on this subject. In said article cases occurring in the practice of some of the most distinguished medical writers are related. That such a disease as meningeal rheumatism exists cannot be doubted, as many well-authenticated cases of the disease have been reported.

Selections.

THE OPERATIVE TREATMENT OF GENU-VALGUM.—A boy of 18, presenting a bad case of knock-knee of twelve years standing, was admitted into the Aberdeen Infirmary on the 9th of April, 1876. The patient was a robust, strongly muscular lad, well nourished, but, owing to the deformity, short of stature. The deformity was so great, that, when the patient stood erect, the hand could "be passed between the transposed knees." Mechanical treatment was used for some time, until it became evident that it was useless to pursue it further, and operative measures were then decided upon. On May 17th, 1876, the patient was chloroformed, and the right knee was flexed and the thigh turned outward. A long and strong tenotomy knife (Adams's) was introduced through the skin, 3½ inches above the tip of the internal condyle on the inner side of the thigh, and so far back as to be opposite the ridge of bone running between the linea aspera and the condyle. The blade was then carried "forward, downward and outward," over the front of the femur. When the point of the blade could be felt under the skin, in the groove between the condyles (the normal position of the patella in the flexed position), the cutting edge was pressed against the bone, and the soft parts and periosteum divided in withdrawing the knife. The external wound thus made was one-third of an inch long, and terminated in the cavity of the joint. Adams's saw for subcutaneous division of the neck of the femur was then introduced, and as soon as it was estimated that the condyle was entirely separated, and that the saw was approximating the poplitcal space, it was withdrawn. The knee was now completely extended, and the limb was forcibly straightened laterally; the hands of the operator forming the power, and his knee the fulcrum, by which this part of the operation was accomplished. The undivided portion of the condyle gave way with a snap upon the application of a moderate amount of force, and the limb immediately became straight. The limb was then simply bandaged to a long Liston splint, and the patient placed in the recumbent position. The other limb was similarly operated upon, on June 6th. Lister's antiseptic measures were carefully carried out, and the reaction in each case was almost *nil.* After the first operation the temperature never rose above 99.8 deg., in the second reaching 100 deg. only. The apparatus was removed after the first operation on the sixteenth day, and passive motion resorted to. Fifteen days after the second operation, passive movements were also instituted. There was never any pain, and five weeks after the last operation, the patient was allowed to walk. The movements of the limbs became perfectly normal (the detached condyles uniting perfectly in their acquired positions); and on July 21st, 1876, the patient was discharged, "walking perfectly."—*Edinburgh Medical Journal.*

RETENTION OF FRACTURED MAXILLÆ.—Fractures of the inferior maxilla are far more frequent than those of the upper maxilla. Some of these fractures are right difficult to reduce and retain in position, while in many cases the deformity is slight, and retention in position is easily accomplished. Hence, a double cause for the number and variety of appliances used in practice. Some are quite ingenious, and difficult of application; others are very simple, and easily applied.

In two cases of fracture—the first, fracture of the superior maxilla, just released from treatment, the second, of the inferior maxilla, yet under observation—india rubber rings, made of narrow sections of rubber tubes, and pased over the neighboring teeth, served the purpose of retention admirably well.

The first occurred in a French creole, twenty-six years of age, who, in an unsolicited bull fight, was knocked down, and though a fallen foe, was stamped in the mouth by his cowardly adversary. The right superior maxilla was fractured. A section of bone about one and a half inches square, including the alveolar process in front and part of the hard palate, was so displaced as to make an ugly deformity.

The piece of bone was adjusted and retained in place by a couple of rubber rings for twenty-five days, when the union was complete.

The second case is that of an Irishman, thirty years of age, who entered a surgical ward in the Charity Hospital, on the 16th of August 1877, with a double fracture of the inferior maxilla, caused by a blow with a brick-bat. One fracture occurred about an inch to the right of the symphysis, the other just in front of the left angle, both compound and comminuted. The tendency to displacement was hard to overcome, the application of an external splint, with a bandage closely applied, and the suturing of the teeth with the largest size silver wire, proving inadequate.

Graduated rubber rings, made of sections of tubes of different sizes, were passed over the first, second and third teeth from the seat of fracture, which held the loose section of bone firmly in place. A pasteboard splint, with a four-tailed bandage, was also applied. This dressing was made one week after the injury. One month after the injury, union was still incomplete, and fragments of necrosed bone were removed. Perhaps a more artistic appliance to such a fracture would not have secured a better result. Even in this exceptionally bad case, the efficiency of the rings was clearly shown.

The elasticity of the rubber rings is sufficiently powerful to overcome any muscular contraction which might tend to disarrange the parts, and constantly keeps the fractured edges of bone in close approximation. Indeed, a force too strong may displace the teeth, especially those next the seat of fracture.

Now, we do not urge the substitution of these rubber rings, in all cases of fracture of the maxillary bones, for the more admirable contrivances which we have at our command, such as the interdental splint of vulcanized rubber. We are very often forced to utilize what we have, in the absence of what we need. A great many fractures, even of the lower maxilla, are very easily held in proper position, and we would only suggest the use of these rubber rings as a cheap and simple device, the value of which we hope will recompense for the space occupied by this article.—*New Orleans Medical and Surgical Journal.*

AN INTERESTING CASE OF OBSTETRICS, WITH GENERAL REMARKS. On the morning of August 18th, 1877, I was called in consultation by a partner, Dr. J. K. Stone, to render him assistance in a case of labor—primipara. On digital examination, I found that I could penetrate but about an inch into the vagina. I recognized a tense, unyielding membrane. Ocular examination revealed a tense muscular septum occluding the vagina, there being only a small orifice at the urethral portion, through which I could pass a small probe, and through which, with each pain was passing a little bloody fluid. I informed husband and parents and asked for consultation, for I feared, besides the vaginal trouble, there might be deficiency in the bony pelvis, as externally she was very ill-formed, partaking more of the masculine physique. Dr. Tottenham, of Sempronius, answered my call, and in ten hours from the time I first saw her we attempted delivery. Dr. J. K. Stone administering chloroform, and Dr. Tottenham, with his fingers, holding open the vulva and vagina, I passed a small probe through the orifice, and with the probe as a guide I punctured with a curved bistoury, and then inserted the probe-pointed bistoury, and laid open the obstruction antero-posteriorly to more than an inch in extent. Expulsive pains coming on did the rest. Now having room, I at once applied Brickell's forceps without any trouble, and with the next contraction of the uterus succeeded in effecting the delivery of a nine-pound child.

Dr. Tottenham and myself having been pupils of Professor Brickell, adopted his plan of immediate delivery of the placenta. The uterus at first contracted tolerably well, but in a few seconds there occurred alarming hemorrhage. Dr. Stone administered sixty minims of Stark and Dohme's liquor ergotæ hypodermically, Dr. Tottenham applied cold, and I injected solution perchloride of iron into the uterus. We succeeded in checking the hemorrhage, and in one hour from the commencement of the operation all was well. We washed out the vagina for ten days, following the delivery with a carbolic acid solution. There was no fever, or any untoward trouble, and now the organs are entirely well. The membrane was not allied to the hymen, being musculo-fibrous, and the husband and wife assured me that until within the month previous to delivery there had been no obstacle to coition. The tissue at the point of junction with the urethra was a quarter of an inch thick, very vascular.

The woman had never had any trouble in menstruation, though on account of a scrofulous vitiation and anæmia, she was rather late commencing.

One further remark. When a student of medicine under D. W. Brickwell, we were always taught that after the delivery of the child the placenta was to be speedily delivered, it being now a foreign body *in utero.* His plan I have adopted in practice, and I have never yet had any trouble result, although I have been called in on two occasions to deliaer tha placenta after fourteen and twenty-four hours, by competent and skilled physicians, who had been taught otherwise, and had strong faith in the *vis medicatrix naturæ.* In the fourteen hour case there were no ill effects; in the twenty-four hour case the placenta was putrid, and the woman had puerperal peritonitis with partial sloughing of the vagina. With one hand to make gentle traction on the cord and the other to knead the uterus, I cannot think there can be any danger of producing inversion. I make these remarks because I notice a discussion going on in the journals, in regard to the management of the third stage of labor.

To another point my attention has been called by a late article in the *Obstetrical Journal of Great Britain and Ireland,* viz: the effects of narcotics and hypnotics on the fœtus. I have noticed that in labor without these agents, although the time consumed might be the same, there was less difficulty in resuscitating the child, and in one case where we had to keep the woman under prolonged narcotism with morphia and chloroform, the child showed the effects of the agents and lived *but a short time*—and it was an entirely different condition from the asphyxia of Butt.—*New Orleans Medical and Surgical Journal.*

CHARLATANRY IN DESTRUCTIVE DISEASES.—When the religious press opens its columns to the advertisements and paid laudators of practioners who employ secret remedies, it seems to me to be participating in one of the grossest frauds of modern civilization. I say religious press; for secular papers, being regarded as newspapers, are not so fully credited, are not so influential, especially with the religious public, as the religious presses are. The secular press is not held to such strict accountability as the former. But even for the former there is a class of advertisements forbidden by law, because they give publicity to infamous employments. A lottery even can not be advertised without a penalty, because of its fraudulent workings.

The publishers of the religious press exculpate themselves from participating in the wrong of advertising the cures of charlatans, by saying that they are not responsible for the truth or value of the thing noticed. If this be sound doctrine, the theater, circus, and every other amusement, may be given currency in a religious journal. Indeed, the religious press can get double price for this class of advertisements, for their pious readers behold it as a *quasi* indorsement; and it is because of this implied recommendation that cancer and consumption doctors patronize religious papers so assiduously.

What is the nature of an advertisement of a secret remedy for cancer and consumption? Let us see. A cancer is the most terrible of all diseases to which the human form is liable. It pervades the whole earth, attacking the poor, the rich, both sexes alike. Its development in any one is a horror. Its *cure*, therefore, by any remedy or system of practice, would be a boon of incalculable value. To discover a remedy and promulgate it, would be one of the grandest performances of man. Such an achievement would cover the whole life of such a man with the benediction of suffering humanity—load him with rewards, and "gild his sepulcher and embalm his name." It would answer, in short, all the powerful instincts we possess of pity, mercy, honor, wealth and fame. Like Jenner's renown, it would grow with the age.

From the knowledge we possess of human instincts and practice to relieve suffering and even danger, periling, as men do, health and life in such divine acts, we have no hesitation in asserting that no human being, acquiring either by laborious research, or by purchase, or in any way, a method of curing cancer or any destructive disease, *could keep so fearful a secret.* He must publish it to the whole race as an act of mercy and love; his human heart would not permit him to do otherwise. There is but one excuse for the man who could conceal so important a secret, and that is that he is a *moral idiot!* No, the *claim* of so invaluable a secret remedy is a positive proof that it is a gross fraud, for only a fiend could keep it.

But the cancer doctor has an excuse, and it is this: "Am I not entitled to the reward of my discovery and skill, like any other inventor or creator of useful knowledge? If I tell my method and teach it broadcast, it would give every one the same opportunity, and people would not come to me from a distance—come to *me* as the great cancer (or consumption) doctor."

The creator of a book has a copyright, but the book is sold everywhere, and any one can read it. The inventor of a machine has a patent, and gets a royalty. There is no secret, however, in these cases; all can get the benefit by purchase at their own doors: it is not necessary for the people who have need of these things to go at great expense to a distant place to obtain them. Now, I will admit that a remedy disclosed, and the practice with it, can not be treated exactly as the question of the book or the machine; but this I can say, that if any man has a remedy, and knows its application cures cancer, if he will go to the capitals of nations—christian or pagan—he can procure for the disclosure and demonstration millions of money, and honors and titles of distinction besides. No, it is impossible to urge the money question as a reason for keeping the dread secret. How, then, can a man demand what it is impossible to accomplish, namely, that people from remote places must come to him for treatment? I repeat, the pretense of a secret cure is a tacit confession of fraud in a moral sense.

From all who think that they have received any benefit by the prescriptions of these charlatans, certificates are obtained, which are published; generally they are untruthful, unless the disease for which they had been treated was simple in its character. But how many, who have been cheated and robbed, go away in silence and despair, and nothing is heard of their disappointment.

I have now sufficiently shown, I trust, that the self-assumed possessors of cures of cancer and consumption violate the common instincts of humanity, whether represented by love of money, pity, benevolence, honor or fame; all of which are immeasurably more gratified by publicity of methods of treatment than by their concealment. And I therefore re-assert, without a fear of successful contradiction, that all those who assume, or participate in the assumption, that a secret cure for cancer or consumption exists, are parties to the basest fraud of modern times.

Finally, when it is announced that such charlatan has been a regular physician, and is a graduate of a regular medical school, it is an attempt to cover his nefarious practices with the indorsement of a humane and self-sacrificing profession—one that abhors such secrets—one that perils itself in the face of pestilence and war to aid suffering; and every honest school, when its title to honor has become degraded by one who announces the possession of a secret remedy for the cure of a dire disease, and refuses to disclose it, hastens to erase his name from its honorable enrollment, and his profession spews him out of its mouth.—*From American Practitioner.*

GLYCERITE OF KEPHALINE.—There is a strong tendency to seek remedial agents in animal organisms, and the favor those already produced have received from the profession, indicates that good results have followed the use of them for the cure of disease. Pepsin is now so generally employed, that it may be regarded as an acceptable agent, whose efficiency is above question, and which is placed in the time-honored list. No physician would think of combatting aberrations of the digestive functions without seeking its good offices.

Isolated pancreatic juice has more recently sought professional endorsement. To Dobell the credit belongs of having first presented it to the profession. Its value is not so well determined as that of pepsin, and yet there is but little doubt that it is an excellent addition to our list of remedial agents. Admitting, as we must, that pancreatic juice is decomposed in the stomach by the acids, nevertheless it does not necessarily invalidate its use, because it will emulsify the fat and oils before they are taken into the stomach, and in consideration of the facts that the fats and oils previously emulsified pass through the stomach in a condition ready for appropriation, pancreatine, by previously emulsifying these, may prove exceedingly valuable in certain morbid conditions of the system. Ptyaline has been introduced as a chemical to supply the place of the normal saliva, but of its value I am not prepared to speak.

The last and most important attempt to appropriate the products of organic chemistry to the purposes of therapeutical science, is the isolation of protagon from the brains of animals, and wheat and its administration in diseases characterized by general vital deterioration.

Chemical research by Hentier and others, has demonstrated a decided deficiency of protagon in those whose intellectual powers decay, whether prematurely or by the natural changes incident to advanced life. The same deficiency is characteristic in those who destroy their vital powers by natural or unnatural sexual excesses; as also in those who overtax their intellectual powers by brain work. While histological research has demonstrated the relation between brain deterioration and deficiency of protagon, Routh, of London, Tilbury Fox, Tempini, of Italy, and Professor Hammond, of New York, give corroborative testimony that fish, oysters, eggs and other rich foods in organic phosphorous compounds, are efficient agents in the restoration of the absent amount of protagon.

Dr. Charles G. Polk, of Philadelphia, who has spent much time in chemico-histological research, and whose investigations of those dead of tubercular disease seems to determine a direct relation between deficiency of protagon, and the development of tubercular phthisis, says in the August 2d, 1873, number of the *Medical and Surgical Reporter*, that in 1857, while engaged in the chemico-histological study of consumption, that he found that there is always a deficiency of the phosphorized brain principles in the medulla oblongata, cerebellum, and at the base of the cerebrum, and that this deficiency is very strongly evinced in the nerve mass near the origin of the eighth pair of nerves.

Dr. Polk having determined the deficiency of protagon in blood and nerve masses as the characteristic feature of phthisis, conceived the idea that the remedy for the disease was the restoration of the missing phosphorous compounds to the system. Upon analysis of the brain, he determined that the protagon or morphological brain principle is hypophosphorous acid of the tribasic variety, in union with the alkaline salts, glycerine, olein and albumen.

In accordance with this determination, he formed these isolated brain principles into a glycerite, and employed it in diseases depending upon general vital deterioration. The results have been universally successful. In incipient phthisis the isolated brain principles have given results far more successful than heretofore accrued from the use of cod liver oil. I have had numerous opportunities of witnessing the employment of both Dr. Polk's protagon and glycerite of kephaline since 1869, and I can recall many cases in which there were very strong evidences of tubercular disease, but which rapidly improved under the use of the glycerite of kephaline. One case, especially, Mr. S., a member of a well known firm of surgical instrument manufacturers. In October, 1869, when he came under Dr. Polk's treatment, he was an apparantly hopeless case of phthisis. He was placed on glycerite of kephaline, and in six months was apparently in the enjoyment of good health. Since then, I have been a witness to equally satisfactory results in several dozen cases, and there is no doubt in my mind but that it is a very important contribution to the therapeutics of this malady.

To claim that it is a specific for tubercular consumption, would be claiming too much. It is not entitled to such a reputation, and the attempt to exalt it to this position will prove unsuccessful. Its value consists in restoring back to the system the alkaline hypophosphites which are deficient in the blood and nerve masses, and thus restoring the integrity of the functions to which these are so indispensable, namely, the generation of the nerve force transmitted for digestion, assimilation, nutrition and respiration through the eighth pair of nerves.

Without venturing into an extended analysis of the pathology and tiology of tubercular diseases, there are a few points right here suggested, to which it may not be irrelevant to allude. The lesions which characterize phthisis are mainly lesions of these very functions. Pancreatic deficiency, which Dobell supposes to be the developing cause of the disease, the primary lesion from which the other lesions accrue, is but an expression of impaired function of the excito-nutrient nerve system. Duodenal dyspepsia, so accurately described by James Clark, and which he declared to be the earliest symptom of tubercular trouble, is, in a large measure, a consequence of pancreatic deficiency, and depends upon the acid condition of the small intestines, which Bennett regarded as the immediate agent in the production of most of the lesions essentially connected with the malady, as the more than neutralization of the normally alkaline pancreatic juice, and consequent interference with the emulsification of the oleaginous constituents of the food, whereby an excess of the albuminous portion enters the blood, while the carbonaceous portion is, in a great measure, lost by not being prepared for assimilation.

In consequence of deficient emulsification of the fatty elements, butyric fermentation takes place, and the acid condition so graphically described by Bennett, is produced. It thus appears, and sanctioned by high authority, that tubercular disease, or rather the development of the tubercle, is the immediate consequence of an anterior cause. The anterior cause must be sought in the nerve masses, from which the abdominal viscera derives its nerve influence. Thus we are brought to the pneumogastric, the medulla oblongata, and the cerebellum. It is in these Dr. Polk found that the hypophosphites are uniformly deficient. If the great determining cause be in a deficiency of the hypophosphites in these nerve masses, the rational indication would be their restoration.

Churchill, of Paris, who is, I believe, justly regarded as the author of the phosphorous theory of consumption, as early as 1857 contended that the disease originated in a deficiency of phosphorous in the system, in an oxidizable form, but he did not make any chemical analysis to determine the location or formula of the missing element; consequently, we must infer that he arrived at his conclusions entirely on theoretical grounds, while Dr. Polk based his conclusions on actual chemical analysis of the blood and brain of those dead with phthisis.

Dr. Churchill introduced into medical practice laboratory-made hypophosphites of calcium and sodium, while Dr. Polk first isolated and employed brain hypophosphites in the treatment of tubercular consumption, and the success he has had with his glycerite of kephaline and Lœflund's extract of malt, indicates a decided superiority of this treatment over that usually employed by physicians.

In other cachectic and devitalized conditions of the system, the results with these agents exceed those derived from the usual tonics and alteratives. In nerve and brain exhaustion, glycerite of kephaline is without a rival—no agent compares with it. In impotency it is almost specific, in the absence of organic defect. The dose is about fifteen to twenty drops, given with malt vegetable tonics or in water, three times a day. The following is the formula:

℞. Isolated cerebrate or hypophosph. of ammonium . 8 parts.
Isolated cerebrate or hypophosph. of potassium. . 3 parts.
Isolated cerebrate or hypophosph. of calcium. . . . 8 parts.
Isolated cerebrate or hypophosph. of magnesium. 3 parts.

Isolated cerebrate or hypophosph. of sodium....8 parts.
Glycero hypophosphorous acid (isolated).......5 parts.
Cerebric acid............................ .5 parts.
Pure glycerine...........................60 parts.

The hypophosphites are isolated almost chemically pure by macerating protagon in bisulphide of carbon, and precipitating at a low temperature. The hypophosphites thus obtained are very soluble in the mixture of the glycerine and the acids. The preparation is almost as clear as the glycerine, and has an agreeable acid taste. At present, it is only manufactured by A. C. Dung, of New York city. The writer is in no manner concerned in its production or sale, and consequently cannot answer individual inquiries.—*Detroit Medical Journal.*

RECENT PROGRESS IN SYPHILOLOGY.—The question of the unity or duality of the virus producing the different varieties of the venereal sore has been recently discussed by Mr. J. L. Milton, of London. From the consideration of a small number of cases reported by others, Mr. Milton concludes that the duality of the venereal virus is an established fact. Considering that a majority of the foremost syphilologists in England and Germany, and not a few in this country, hold opposite opinions, and probably upon equally good grounds, the question can hardly be regarded as settled.

Strong grounds in favor of the existence of a true syphilitic gonorrhœa is taken by Mr. Henry Lee, in the Hunterian Lectures delivered by him before the Royal College of Surgeons in 1875. The experiments of Prof. Tarnowsky, of St. Petersburgh, who succeeded in producing syphilitic infection by means of the blenorrhœic matter from syphilitic patients, gives considerable support to this view. Not a few American surgeons, among them Prof. Gross, hold the same opinion.

Whether induration of the initial lesion occurs prior to constitutional infection, or whether it is an indication of such infection having taken place, is considered by Auspitz. He gives a detailed account of thirty-three cases of indurated chancre, in which the initial lesion was excised at various times (four days to seven weeks) after the first appearance of the morbid process. The following results were obtained: The wound healed by first intention in six cases. In none of these eighteen cases did induration recur in the cicatrix. In the remaining fifteen cases, the cicatrix became indurated. In fourteen cases no constitutional syphilitic symptoms appeared after a sufficiently long interval of observation after the excision. In nine cases constitutional syphilis occurred despite the incision. In the remaining ten cases the result, owing to insufficient length of time for observation, and other causes, remains doubtful. From the results obtained in these cases, Auspitz concludes that the initial induration is not an expression of syphilis, but on the other hand the real *depot d'infection*, from which the organ is saturated with the virus.

The excision was usually performed by seizing the induration with a vulsellum, raising it from the surrounding healthy tissue, and cutting the button out with a pair of curved scissors. The edges of the oval wound were then united with sutures or adhesive plaster.

The hereditary transmission of syphilis has lately been investigated anew, with, as yet, no definite results. Dr. J. E. Atkinson considers the question from a histological point of view, and arrives at the conclusion that, from the biological relations of the sperm and germ-cells to epithelium and white blood-cells, syphilis may be transmitted by either parent. In an excellent report of two cases observed by himself, Dr. R. W. Taylor thinks himself justified in concluding that "syphilis may pass from father to offspring while the mother remains unaffected." The careful and complete report of these cases certainly appears to be pretty positive evidence. Kassowitz enters into by far the most extensive investigation of the subject, and concludes from his researches that syphilis may be transmitted by either parent, the other remaining unaffected. Keyfel endeavors to prove that the offspring may be infected with semen from a syphilitic father, and the mother escape the infection. Owing to the incomplete manner in which his cases are reported, however, his statistics are not of much value as testimony. Diday also tries to establish his favorite theory of infection of the mother through the fœtus; but the simple non-observance of primary lesions on the woman surely cannot be considered, in the nature of positive proof that she did not obtain her syphilis by the usual road! Oewe, after the careful examination of a number of cases occurring under his observation, concludes as follows: (*a*) Fathers suffering from latent constitutional disease have no direct part in the development of hereditary syphilis; (*b*) the children of such fathers are healthy; (*c*) hereditary syphilis invariably supposes an infected mother; and (*d*) syphilitic semen does not exert any influence on the maternal organism, either directly or indirectly (by pregnancy).

Sturgis reviews the question, taking the above mentioned views of Kassowitz for a text, and points out clearly the fallacies which the advocates of the direct paternal transmission of syphilis fall into. After a careful consideration of the whole subject, it seems to the present writer that the weight of evidence rests with those who deny the direct transmission from the father, and that satisfactory proof has not yet been furnished that a syphilitic child can be born without previous infection of the mother.

Attention has recently been called by Fournier, Rollett, and others, to the importance of recognizing the influence of syphilis as a factor in phthisis. Fournier sums up the anatomical points of distinction between tubercle and syphiloma of the lungs as follows:

1. Situation: Tubercle involves upper part of both lungs; gummata one lung, and may be limited to a portion.

2. Number: Gummata are few, as a rule; solitary tubercle sooner or later become confluent.

3. Gummata are larger than tubercles; never miliary in form.

4. Color: Gummata are always white or yellow—never transparent like miliary tubercle.

5. Consistency: Until softening takes place, the gumma is of more equal consistence than tubercle, and when it softens does not break down wholly, owing to the capsule.

The diagnosis is difficult. Attention is called to the fact that a remarkable tolerance of the disease is sometimes seen, in which event the patient retains his flesh and strength to a considerable degree. Another point of distinction is its slow evolution, whereas it is rapid in tuberculosis. The following conclusions are offered:

1. Tertiary syphilis can produce, in the lungs, lesions which, either locally or by reacting on the general system, simulate pulmonary phthisis.

2. These lesions are often amenable to treatment; however grave and important they may appear, they are far from being always beyond the resources of art.

3. Consequently, when a case of pulmonary lesion presents itself, it is important, unless the existence of tuberculosis can be certainly made out, to ascertain if the lesion can be traced to syphilis. It is necessary to remember that syphilis is a possible cause of phthisis.

4. When syphilis is suspected of being the cause, the primary indication is to prescribe specific treatment, as such has been known to produce gratifying results.

An important practical contribution to this subject is the report of five cases by Dr. L. McLane Tiffany—the first case, as far as known to the present writer, reported by an American surgeon.

On Syphilis of the Brain and Nervous System.—The monograph by Heubner is at once the most comprehensive and the most complete upon the subject in the language. Monographs and clinical reports have also been published by Buzzard, Broadbent, Fournier, Wunderlich, Erlenmayer, Taylor and others. The possibility of syphilis acting as a cause of psychical and nervous disturbances must be borne in mind in obscure cases. The treatment most successful is iodide of potassium in large doses.

In a paper on "Early Syphilis in the Negro," Dr. J. E. Atkinson, gives the results of one hundred cases observed by him in that race. The subject discussed by the author is of great importance to every physician practicing in the South, and is handled by one who is fully conversant with it in all its details. The article is so much condensed that an abstract of it within the limits at our command is impossible.

The Treatment of Syphilis by means of the Hypodermic Injection of mercuric bi-chloride, (Lewin) chloro-albuminate and mercuric peptone, (Staub, Bamberger, Grunfeld, Neumann, etc.) and calomel, (Kolliker) has lately been extensively pursued by the authors named, and superiority claimed for each of them. The difficulty of applying this method in private practice, and the disagreeable results—as abscesses and circumscribed dermatitis—which not onfrequently occur, will necessarily limit its application. The veteran syphilidologist, Sigmund, on the other hand, in a recent lecture, reviews the new methods of treatment, and concludes that subcutaneous injection is only suitable in mild cases, and that in severe cases he always relies with more certainty upon the old methods.

Of decided novelty are the views of Keyes upon "The Action of Mercury." By examining the blood with a measuring apparatus known as the *hematimetre*, he found that mercury in small doses, in health or disease, increases the red globules. He has arrived at the following conclusions, among others, as the result of experiment:

"Syphilis diminishes the number of red corpuscles below the healthy standard.

"Mercury, in small doses, continued for a short or a long period in syphilis, alone or with the iodide of potassium, increases the number of red corpuscles in the blood, and maintains a high standard of the same.

"Mercury, in small doses, is a tonic to individuals in fair health—not syphilitic. In such individuals it increases the number of red blood corpuscles."

Drawing these conclusions from his investigations and clinical experience, Keyes was led to adopt what he terms the "tonic treatment" in syphilis. This consists in beginning with very small doses of mercury ($\frac{1}{48}$th gr. corrosive sublimate, $\frac{1}{6}$th gr. proto-iodide, $\frac{1}{2}$ gr. blue mass) three times a day, and increasing the same—carefully watching its effects—until the constitutional effect of the medicine (abdominal pains, diarrhœa, slight stomatitis) are manifested. This is termed "full doses." When this is ascertained, it is continued until the symptoms for which mercury was administered have disappeared, when the dose is dimished one-half—this is the patient's "tonic dose." This is continued steadily from two to two and a half years. Where rapid action is necessary, to obtain the effect of the "full dose," inunction or the mercurial vapor bath may be combined with the internal administration of the remedy. Of course the general condition of the patient as to diet, hygiene, etc., is neglected.

In common with nearly all syphilidologists of the present day, Keyes advocates the use of mercury altogether in the early stages of syphilis; the "mixed treatment"—mercury and iodides—in late secondary eruptions, and the iodides in the gummy lesions wherever occurring. In this stage—tertiary—the author's faith in the iodides is strong, and is manifested in this apotheosis of the potassium salt:

"Under the kindly influence of iodine, unsparingly pushed, the node melts away, the gummy tumor becomes absorbed, the spreading ulcer blushes with healthy granulations, the palsied muscle regains its contractibility, the veil drops from the clouded intellect, the maniacal paroxysm is followed by peace.

"No means in the physicians hands place him so near the Deity as the iodide of potassium. With it, in well-selected syphilitic cases, he can sometimes almost effect a resurrection. Wasted and lost functions are restored; the mind, the memory, the speech, the hearing, the sight, the taste, the touch—all may be recovered by its aid. The prognosis in the most desperate conditions is always infinitely better where syphilis can be made out as having caused the trouble, than where any other diseased condition is at fault; and no amount of destructive tertiary disease need occasion despondency so long as the integrity of the stomach can be preserved, and the physician is strong in his faith in iodine and expert in his methods of using it.

That Dr. Keyes is not a homœopathist in his use of this drug, we may gather from the statement that he has "given *an ounce a day* of the iodide of potassium (ʒij every six hours) in several cases with advantage." He adds, however, "it is very exceptional to give such large doses."

Notwithstanding the clear directions given by Dr. Keyes, and the undoubted superiority of his plan in some cases, it may be doubted whether it will supersede the old-fashioned methods, and especially the inunction cure, combined with the internal use of iron and in the late stages, the iodides.

Bilbache gives a good summary of the history and treatment of syphilis and the so-called chancroid. His recommendations for the prevention of venereal diseases would, if adopted, be a long step on the road of progress, although falling short of what we think is not only desirable, but practicable. We think the attempted mollification of the pietistic elements of society is out of place in a scientific work in our day. Things should be called by their right names. Let us not employ false pretenses. When we mean "the legal and sanitary control of prostitutes," let us say so, and not attempt to hide our meaning under a more ambiguous, though perhaps less offensive, phrase.—*Virginia Medical Monthly.*

Editorial.

The following abstract of proceedings had in the American Pharmaceutical Association, held at Toronto, Canada, as reported to the *Virginia Medical Monthly*, shows increasing interest felt in the progress of pharmacy. Though taught and practiced as a separate science, the operations of pharmacy are so intimately connected with, and so essential to, the medical profession, that advancement in knowledge on this subject should be hailed as progress in medicine. The next meeting of the Association, as will be seen below, convenes in Atlanta, Ga., on the first Tuesday in September, 1878:

AMERICAN PHARMACEUTICAL ASSOCIATION.—Thinking that a short letter detailing some of the proceedings of the "American Pharmaceutical Association," now in session in this city, (Toronto, Canada,) would be interesting to your readers, I have concluded to drop you a few lines.

The 25th annual meeting of this Association (which has on its roll over 1,000 members) was called to order in the City Council Chamber, by the President, Mr. Bullock, of Philadelphia, at 3 o'clock, P.M., Tuesday, September 3d, 1877. The mayor being absent from the city, Alderman Wright represented him, and made a short address of welcome, which was replied to by Mr. Bullock. About one hundred delegates and members were present.

After some preliminaries of organization, the President read his annual address. Commencing with a reference to the fact that this Association had just reached the first quarter of a century of its history, and alluding to its large membership, and also to the fact that this was the first time that they had ever met outside of the boundaries of the United States, he passed on to a review of the history and progress of pharmacy, tracing it back to its earliest beginning.

The reports of the Permanent Secretary, Prof. J. F. Maisch, and of the chairman of the Executive Committee, both very interesting to pharmacists, were then read. Some invitations to entertainments presented from the Ontario College of Pharmacy and Toronto druggists, were read and accepted; and this about finished the business of the first session.

Owing to the great distance, and the expense involved, the Southern States were not well represented. South Carolina had only one representative (Mr. Heinith, of Columbia); Virginia two (F. H. Masi, of Norfolk, and T. R. Baker, of Richmond); Georgia three (Mr. Tarrant, of Augusta, and Mr. Ingalls and Mr. Menard, of Macon); and Kentucky only one (Prof. Diehl, of Louisville). The Western States did not turn out well, but the Northern, Eastern and Middle Atlantic States were well represented.

To those who have yet to visit Toronto, I will say they may be prepared to see a very handsome city, well built, and regularly laid out. The public buildings are massive, very large, and very fine specimens of architecture.

At the opening session of the Association, a resolution was passed, inviting the faculty of the University of Toronto, and the medical profession of the city, to attend the sessions of the Association.

At the second session of the Association, the nominating committee reported the names of officers for the ensuing year, which were duly elected. Mr. W. Saunders, of London, Ontario, was elected President for the ensuing year; Mr. Ewen McIntire, of New York, first Vice President; Mr. John Ingalls, of Georgia, second Vice President, and Mr. Emlen Painter, of San Francisco, third Vice President.

The standing committees, such as the Committee on the Drug Market, on Papers and Queries, on Prize Essays, on Legislation, etc., were all reorganized as usual.

Dr. Wilson H. Pile, of Philadelphia, Chairman of Committee on Adulterations and Sophistications, read a very interesting report.

By-the-way, on the morning before the final adjournment of the meeting, at 4 o'clock, this old gentleman was visited with a stroke of paralysis, which rendered him helpless, but not speechless, and his calls for assistance could only be responded to by getting through the opening over the top of his chamber door. The physician who was summoned to attend him said he would recover.

On the second day the Mayor, who had returned to the city, entered the hall, amidst great applause, and proceeded to address the meeting, apologizing for his unavoidable absence from town at the time of the opening of the meeting, tendering the hospitalities of the city, etc. After wishing the members of the Association a pleasant meeting, he retired.

Considerable time was occupied at all the sessions of the Convention in reading essays, replies to queries, and special reports, and in discussions thereon. The subject of the revision of the Pharmacopœia, which you remember was tabled at the last meeting of the American Medical Association, came up yesterday in the regular order of business. Dr. Squibb made a few ramarks concerning his connection with the subject. He had advocated a revision of the Pharmacopœia in the past, but now he was content to let the matter rest. He would be satisfied with any pharmacopœia adopted by the Association. He said his efforts in behalf of a new pharmacopœia had proceeded from the purest motives, and his motives had been misconstrued and himself abused until he was disgusted, and would have nothing more to do with it. Mr. Sheppard, of Boston, rose and said, that from his youth he had learned to look upon Dr. Squibb as high authority, both in medicine and pharmacy, and to honor him for his great integrity of character. He then offered the following resolution, which was unanimously agreed to, viz: "*Resolved,* That while there is among the members of the American Pharmaceutical Association an honest difference of opinion as to the advisability of the plan suggested by Dr. Squibb for the revision of the U. S. Pharmacopœia, the thanks of the Association be, and are hereby tendered to Dr. E. R. Squibb, of Brooklyn, N. Y., for his earnest efforts during the past two or three years to inaugurate an improvement in the plan of revision of the U. S. Pharmacopœia." Dr. Squibb rose and gracefully thanked the Association for the compliment paid him in this resolution.

A committee of five was then appointed to consider and report a plan of action with reference to the revision of the Pharmacopœia. The committee recommended that a committee of fifteen be appointed, to be selected by the President, with special reference to their competency, whose business it shall be to revise the present Pharmacopœia, and make a new one, to be presented at the next meeting of the Association; and if approved, then to be presented to the American Medical Association, subject to their approval, and open to any changes which they may think proper to suggest—the sole object of the pharmaceutical committee being to do the work as they (the physicians) want it done. It is understood that Dr. Squibb declined to let his name be placed on the committee. An able committee, however, was appointed, and one that will work with energy and enthusiasm, dividing themselves into sub-committees, and appropriating the respective branches, such as materia medica, botany, chemistry and pharmacy, to those most familiar with the respective subjects.

When the subject of the next place of meeting came up, Mr. Ingalls, of Macon, Ga., rose and extended an invitation to the Association to meet in Atlanta, Ga. This proposition was immediately seconded by all the Southern members present, who promised their Northern brethren a cordial and hospitable reception. The committee appointed to recommend the next place of meeting reported unanimously in favor of Atlanta, Ga., and when the Association adjourns it will do so to meet in Atlanta, Ga., on the 1st Tuesday in September, 1878.

The Canadians are entertaining their foreign visitors in a very cordial spirit of genuine hospitality, and have on several occasions provided long processions of fine carriages, in which they took the members of the Assosiation, and the ladies accompanying them, through the most beautiful and attractive portions of the city, occasionally stopping to vacate the carriages, and guide their guests through some of the handsome public parks and buildings which adorn the upper part of the city.

But I fear that, unless I cease firing, so to speak, I will contradict the proposition which heads this letter; viz., to write a *short letter.*

MEDICAL COLLEGES.—Notwithstanding the very great stringency in financial matters, medical colleges seem to be opening with larger than the usual number of students.

The extension of the term, as favored by the Association of Colleges, does not, at any rate, interfere with their patronage The classes, so far as we have noticed reported, seem to be larger than heretofore, when the opening occurred in November. This speaks well for those preparing to become members of the medical profession and for their preceptors, who advise that course of study which gives the greatest facilities for thorough preparation. While we do not favor the idea of time of study being made a test of preparation to be relied on in granting the degree, we are conscious of the fact that three months do not allow sufficient time to teach, fully, any branch in the curriculum of studies. It is gratifying to know that when we have served our time in the profession, our mantle will fall upon those who seek something more than the empty title of M.D.

The Louisville, Nashville, and Atlanta colleges have larger classes than last year. Some of them, and perhaps all, commence the present course with a larger number than at any time since the war.

The Atlanta Medical College has in attendance, during the month of October, more students than are usually present in November, and a few days more will doubtless swell the number beyond that of any class since the war.

Much interest is manifested in the various departments of study, and a seeming determination to comprehend and retain the fundamental principles of medicine.

EDITORIAL CORRESPONDENCE.

No. 2214 CHESTNUT ST., PHILADELPHIA, PA.,
October 2, 1877.

Mr. Editor:

A South Carolinian by birth and education, I send to yours as the representative Journal of the Southern States, and submit to your consideration the following practical hints on the therapeutics of phthisis, for publication. Although perhaps not presenting any new fact, I think they will serve as a good reminder of the most trustworthy therapeutical agents we have in phthisis. I have refrained from a strong indorsement of Dr. Polk's glycerite of kephaline, but I am very much pleased with the results I have obtained from it, and hope to see it tested by the profession. * * *

Phthisis is yet considered an incurable malady. No remedy has yet been found that will certainly stay its ravages, and the baffled physician is inclined to think all treatment useless. I do not think, however, that an examination of the subject justifies such a melancholy view. Although we cannot always cure consumption, we can already do much towars delaying its progress, and by the timely adoption of hygienic regulations, do still more towards preventing the generation or devlopment of the tubercular diathesis. As phthisis is a disease of general vital deterioration, the remedy must be found in means calculated to exalt the organic functions of the individual, and obviate all depressing agencies, whether they relate to the body or the brain. Outdoor excercise is a hackneyed injunction, and yet one that is too much disregarded. In the therapeutics of tubercular phthisis, there is nothing equal to it; we, therefore, assign it the first place. Well ventilated sleeping apartments is another well-recognized requisite, written on in every treatise on tuberculosis, and yet not sufficiently enforced. Fresh air by day and night, and outdoor exercise are the great remedies both in the prevention and cure of tubercular phthisis; they must not be overlooked.

Rich nutritious food is another important item, and it should embody the saccharine principles, the phosphates, and the hypophosphites, demanded in brain organic and physical processes. A fact we owe to Dr. Polk, I believe, is that one of the earliest lesions of phthisis is the substitution of butyric for lactic acid, and, as Professor Samuel Jackson pointed out, is an indispensable requisite of secondary or tissue digestion. About seven years ago Dr. Polk demonstrated by experiments on dogs (see "Tuberculosis," New Orleans *Medical and Surgical Journal* for September, 1877,) that lactic acid endows ordinary phosphate of lime with sufficient organismal power to supply the phosphates to the system of an animal. As butyric acid is but a consequence of indigestion, we should try to correct this. I have had good results from nitromuriatic acid and compound tincture of cinchonia. These seem to do better than anything I have tried in obviating the formation of butyric acid. In one case of incipient phthisis they, with the dietic and hygienic management alluded to, seemed to secure a perfect restoration to health. Sulphate of quinine, with nitric acid, is to be substituted when the nitromuriatic acid causes pain in the stomach. If the patient be somewhat anæmic, and no inflammation present, or strong tendency to hemorrhage, I often use this combination with excellent results:

℞.—Acid. nitrici dil.,
Tinct. ferri chl., aa., ... ℥ ss
Sulph. quinia, ... ʒ j M.
Sig.—Twenty drops thrice daily.

I cannot agree with Dr. A. P. Dutcher, that we can well dispense with cod liver oil. I am sure I have witnessed very satisfactory results from its employment. I usually combine it with extract of malt, and add syrup of the lacto-phosphate of calcicum to the combination. Upon this treatment I have seen several phthisical patients gain strength and flesh. I regard it as an excellent association of remedial agents. I prefer the white Norwegian oil, and when I cannot get this, resort to the bottled oil of Marvin.

I have used the compound syrup of the hypophosphites with benefit, in several cases, and regard them worthy of trial. I believe, in conjunction with cod liver oil, they will cure a considerable number of cases in the earlier stages, although utterly useless in the more advanced stage. During the past six months, I have used the brain cerebrates, or hypophosphites, in several cases, and I am well pleased with the results. They seem to be superior to the laboratory-made hypophosphites, and I believe they are worthy of general investigation. As the mode of isolation, and the formula, were published in the October number of the *Druggist Circular*, the objections as to "Glycerite of Kephaline" being a proprietary or secret nostrum cannot be longer entertained. I believe it can be obtained in Louisville, St. Louis, New York, and most of the large cities.

CAIRO, GA., October 8, 1877.

Editor Atlanta Medical and Surgical Journal:

Having seen the case of a child crying in utero published in your valuable JOURNAL, I concluded that I would send you a case equally as interesting and novel—a child born with fractured leg.

Several months since, Dr. W., of this place, requested me to assist him in reducing the fractured leg of a child. When we arrived at the house of the patient's parents, I found a child three days old with compound comminuted fracture of the tibia. The bone was broken transversely across, beginning at the middle and passing upward and outward. The fractured end had passed out, making a wound about the size of a five cent piece. When I saw it the bone had been retracted, inverting the skin, which I suppose had become attached to a spicula of bone, and the wound had healed, leaving an indentation about the size of a large pea and one-fourth of an inch deep. Both ends of the fibula were dislocated. I proposed to Dr. W. that we would cut down upon the bone and remove the portion of skin between the fractured ends, telling him that I thought setting the bone, without clearing the ends, would result in a total failure, as it was impossible for the fracture to knit together with a foreign substance intervening. He disagreed, and it being his case, I submitted. The sequel has proven that I was right. I reduced the fracture and dislocation in the usual manner, but it did no good. The child is still in the same condition; no union has occurred.

The history of the case, as given by the mother, is, that six or eight weeks previous to her confinement she attempted to jump from a cart while the oxen were running, and she fell upon her stomach. She felt the child give an unusual hard jump, as she expressed it, immediately after the fall.

I would respectfully ask the editors of the JOURNAL if my proposed mode of operation was correct?

Respectfully, JULIAN T. MOORE, M.D. (?)

Fractures in utero are to us novel. We publish the above rare accident, and would say to our correspondent that if soft structures intervene, the fractured ends of bone cannot, of course, unite until they are removed. A comminuted fracture, however, may fail to become firm, owing to disturbance of nutrition in the smaller pieces of bone. These may not only fail to throw out callus, but, intervening, prevent the union of still vital portions of the shaft.

If skin or muscle intervene, manipulation would seem to be sufficient to insure co-adaptation of the fractured ends, and time will determine the existence of dead portions of bone, by the establishment of the suppurative process, and formation of abscesses.—[Ed.]

Des Arc, Arkansas, Sept. 29, 1877.

My Dear Doctor:

I noticed an article in the August number of your Journal severely condemning the use of morphine hypodermically. I presume that it astonished many of the profession, as it did myself. The writer (Dr. Ingals) gives a few cases in which the consequences of the practice were disastrous, without comparing them with the thousands of cases in which the hypodermic use of morphine proves both harmless and highly beneficial. I have seen identically the same bad effect as Dr. Ingals describes from the use of this drug given by the stomach to persons who, from an idiosyncracy, could not take morphine at all. I could cite as many of these as Dr. I. can; yet I would not, on this account, condemn the use of morphine by stomach. My own experience teaches me that any one who can bear the use of morphine at all, will do so as well hypodermically as otherwise.

Your obedient servant,
Robt. B. Trezevant, M.D.

We heartily endorse the above views of our correspondent, and intended, in the number of our Journal which contained the selected article referred to above, to have mentioned some other facts which may account for the erroneous impression that the hypodermic use of opium is more dangerous than other manner of administration. Three facts must be remembered in the investigation of this question: 1st, that, as our correspondent has stated, some persons, from idiosyncrasy, do not tolerate opium in any form of preparation or manner of administration; 2d, that too large a dose of this remedy may produce unpleasant symptoms, particularly in certain forms of disease; and 3d, that less quantity is required to produce a given effect, when hypodermically administered, than when given in the stomach. The absorption is more rapid from the cellular tissue beneath the skin than from the mucous membrane of the stomach, even when this viscus is empty, and much more so when the remedy is mixed up with solid or fluid ingesta, so that only a small portion is at any time in contact with the absorbing surface. Moreover, when thus slowly absorbed the full effect of the remedy is never experienced, for the action of the first absorbed portion will have been exhausted before the last has reached the brain, or even the blood vessels.—[Ed.]

EUROPEAN CORRESPONDENCE.

London, October 2d, 1877.

Messrs. Editors Atlanta Medical and Surgical Journal:

It has long, been the custom among medical schools, to open the season of teaching with what they have been pleased to term an introductory lecture. Sometimes this lecture takes the shape of a biography, serving no practical purpose but to show the research of the speaker, and test the patience of the audience. Sometimes the lecturer delivers a sermon on the duties of physicians, good enough, no doubt, for those who, having completed their education, are about to enter on the active work of their profession, but which can make no possible impression upon the young men who have assembled to store their minds with the facts necessary for an examination, of which this subject forms no part. On them, and many kindred subjects, much valuable time is wasted, while the number of introductory lectures devoted to the discussion of scientific subjects, is exceptionally small. One of these bright exceptions was the introductory delivered at King's College, by Prof. Lister, who, having accepted a chair in this institution, has moved to London from Edinburgh.

The first of October was the great "opening day"—to borrow a trade phrase—of the London medical schools, and although all, or nearly all, the introductories took place at the same hour, still the lecture theatre of King's College was densely crowded long before the appointed hour, by an audience drawn hither by the world-wide reputation of the lecturer

And here it may not be out of place to mention, that the younger portion of the assembly was much more boisterous and ill-behaved than is usually the case in American schools; so much so, that the speaker had, more than once, to administer a well-merited rebuke.

It was the generally received opinion, that the subject of the lecture would have some connection with the principles governing the application of antiseptics in surgery, with which the name and world-wide reputation of the lecturer are so intimately connected; but in place of that, the Professor chose for his theme some original investigations on the subject of fermentation, the result of which was, to prove, almost conclusively, that the fermentation, souring or development of lactic acid in milk is dependent on a special ferment, to which he has given the name of "bacterium lactis."

Almost any one of the old school doctors, if sitting as an examiner, would reject, as an arrant ignoramus, the man who didn't know that blood coagulated upon exposure to the air. Why, everybody knows that. It was only necessary to put fresh blood in a basin, and the change took place before your eyes. Quite true, it has that appearance; but this is only one more added to the millions of hasty conclusions, errors of diagnosis, which are the result of ignorance and incomplete investigations, which again, are not unfrequently the natural outcome of laziness, inattention, or criminal negligence. There appears to be nothing fixed in science. Things which formerly were accepted as almost axiomatic, are now proven to have been only deceptive appearances. The truths of to-day will be the errors of to-morrow; and so must the living tree of human knowledge increase, feeding on the mistakes of the dead past. Hereafter, the answer of every scientific man to a scientific opinion should be, "So far as investigations have come to my knowledge, such, appears to me, to be the case—mark you, only 'appears to me.'" Henceforth, let there be no intolerant positiveness in science. But to return to the lecture.

Among the first specimens shown by Prof. Lister, was a flask, about half full of blood, which was as fluid as when first introduced into the flask several weeks before. In this experiment, the flask having in the neck a pledget of cotton, through which a tube was passed into the flask, a few inches being left free outside, was carefully purified, and then the Professor, not having before his eyes a wholesome dread of "the Society for the Prevention of Cruelty to Animals," opened the jugular vein of an ox, and passing into it the tube connected with the flask, withdrew about a pint of blood. This was the specimen shown, and the air had to it free access through the pledger of cotton in the neck. Yet there it was, apparently in exactly the same condition as when first drawn—no coagulum, no change of color, (save a faint reddening on the surface, presumably from the action of the oxygen of the air), and no unpleasant odor. To one not abreast with the most recent investigations, this would appear little short of a miracle. This specimen was similar to one shown before the British Medical Association, at Manchester, by Dr. Roberts, of whose address you have already had a resume.

More prone than blood even to change, is a mixture of blood and water; yet here was another flask, containing some water, which, having been first boiled and cooled with proper precaution, had received an addition of some of the blood from the flask first shown. This flask, like the other, was simply stopped with cotton, so that the air had free access to the contents; yet here, as before, the fluid had apparently undergone no change.

A flask half filled with boiled milk was next shown, the stopper, as before, being cotton wool; but, although the specimen was several weeks old, the milk gave no evidence of change. This recalls experiments made by myself many years ago, on the preservation of milk, of course keeping in view the then orthodox opinion that the air was the cause of the changes which take place in that fluid, when exposed under ordinary conditions. A quantity of milk was placed in a bottle, enough oil poured on top to nearly fill the bottle, and the whole heated until the milk boiled. A bit of cotton was then put in, to exclude the dust, and the whole put aside to cool. It is needless to say the experiment was successful, but was looked upon according to the theories then in vogue, as merely the result of the exclusion of oxygen. How often are we unconsciously on the very threshold of truth, but too ignorant to take advantage of our position.

This milk specimen was the last of the series closed with cotton stoppers. The next set was most extraordinary, in that each glass containing a specimen was simply closed with a loose glass cap, and one or more of these glasses, sometimes to the number of twelve, were placed on a piece of plate glass and covered with a bell glass, which was freely and frequently removed and replaced.

It will appear that Professor Lister is not to be numbered among the supporters of the germ theory—at least to a very limited extent only. That is to say, he believes fermentations to be the result of the presence of some *variety of bacteria;* but he is not prepared to admit the existence of a bacterium germ in the absence of more positive proof, and in view of the fact that the known manner of the increase of bacteria is quite sufficient, he thinks, to satisfactorily account for all the phenomena which accompany their presence.

The effort of Dr. Roberts at Manchester, of which you have had an abstract, was an attempt to show that certain fevers were accompanied by the presence of certain microscopic organisms in the blood; and now Mr. Lister, traveling another of the converging roads, some of which he has already passed over, comes forward to prove:

1st. That the fermentation of milk is always accompanied with the presence of a special bacterium.

2d. That the presence of this special bacterium is always accompanied by fermentation in milk.

3d. That other bacteria, although appearing in certain decompositions of milk, are not accompanied by the lactic fermentation.

A microscopic specimen of the boiled milk just shown, demonstrated the entire absence of bacteria, and at the same time the want of any fermentive action in it. This was one step in advance; but to this experiment it might be objected that the boiling destroyed the preventive principle. Mr. Lister, therefore, determined to make a series of investigations on raw milk.

A quantity of milk was drawn from a cow into a prepared vessel, and thence transferred to a dozen test tubes, each of which was fitted with a loose tube cover, and a bell glass placed over the whole. In a few days they all soured. This was discouraging; but it must be mentioned that the experiment was partly performed in a cow house, the atmosphere of which was, doubtless, laden with bacteria. So it was determined to make another effort—this time in the open air—but the atmospheric conditions were unfavorable, and failure was the result this time also. A third trial was made, this time with increased precautions, and the result was most successful, the milk remaining perfectly sweet in some of the glasses. In some of the specimens other fungi appeared, but there was no souring, unless the bacterium lactis (Lister) was present.

The next step in the investigation was to ascertain the results of the inoculation of known quantities of milk with known numbers of bacteria, and for this purpose it was necessary to estimate the number of bacteria in a given quantity of milk. By means of a delicate syringe, graduated to one-hundredth ($\frac{1}{100}$) of a drop, it was ascertained that a microscopic cover, half ($\frac{1}{2}$) an inch in diameter, was exactly filled by one-fiftieth ($\frac{1}{50}$) of a drop. The number of fields of the object glass in the cover being known, it was only necessary to count the bacteria in one field, multiply by the number of fields in the cover, and the result would be the number of bacteria in one-fiftieth ($\frac{1}{50}$) of a drop. A quantity of milk was then diluted so as to contain one bacterium in each drop. Specimens of milk known to be free from bacteria were then inoculated with one, two and four drops of the solution, and the results were such as might be anticipated—the number of specimens souring bearing a proportion to the number of drops of solution employed; for while some in which one drop was used escaped, all of those in which four (4) drops were put, soured. All of those that soured showed the *bacterium lactis*, (Lister) while those that did not sour, showed none.

Now, it is absolutely demonstrated by these experiments, that the fermentive principle of milk is not a solution, for then every inoculated specimen would have fermented; but the Professor was prepared to admit, for the sake of argument, that the ferment, though non-living, was endowed with the power of self-multiplication as rapidly as the living bacterium; in other words, that the chemical lactic ferment, and the bacterium lactis, were mere accidental concomitants. Then, it would be necessary to imagine the two substances accidentally present should be present in precisely the same number, and that they would always be found in pairs—a bacterium lactis and a particle of chemical ferment. Both these positions the speaker looked upon as inconceivable, and he likewise regarded the exact proportion which he found to exist between the number of glasses fermenting and the number of bacteria counted, as indicating the absence of spores or germs for this species of bacterium.

In the course of the lecture, it was shown that the bacterium lactis refuses to live in Pasteur's solution, and this was regarded as conclusive proof that the bacterium lactis is a different variety from the other bacteria, which thrives in this fluid.

The bacterium lactis the lecturer defined a motionless bacterium—a microscopic fungus, multiplied by fissiparous generation, always by lines transverse to the longitudinal axis of the organism.

In the specimens which did not undergo lactic fermentation, a variety of organisms were found—bacteria and torulæ. One of these organisms, which appeared as little orange specks, was examined and was found to consist of granules differing from bacteria in this respect: that the only evidence of vitality was by seeing them under crucial fissiperous development. These bodies he has named granuligera.

Such is the gist of the lecture of Professor Lister, as understood by me; but some of the views entertained, some of the results of the experiments and some of the deductions and conclusions arrived at, appear so much at variance with the views of other investigators, that I think it best to reserve any comments I might wish to make, until I have seen a printed copy of the address. N. J. NUNN, M.D., &c.

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Time has not been allowed for such perusal of this work as is necessary to give an opinion of its merits. Two hundred pages are occupied in the principles of organic, to the exclusion of those involved in the study of inorganic and general chemistry. It is intended for the use of students, and is supposed to be suited to their wants, considering the limited extent to which the subject has attracted interest.

Hospitals: Their History, Organization, and Construction. Boylston Prize Essay of Harvard University, for 1876. By W. Gill Wylie, M.D. New York: D. Appleton & Co., 1877.

The title of this book is sufficient to create a desire for its perusal. Of the difficulties incident to the proper construction and general management of hospitals few are apprised, and most physicians can yet learn something on these subjects. The principles concerned not only affect the public charge of hospital surgeons, but are more or less concerned in the care of our patients in private practice. The work will, therefore, be found interesting and useful to the general practitioner.

EXCERPTA.

Nerve Stretching in Neuralgia.—Two cases of nerve stretching for neuralgia are given in the *Revue des Sciences Medicale.* The first recorded was a patient of Paul Vogt's, who had wounded the inner aspect of her right forearm by falling upon a cutting instrument. After the wound had healed, there was much impaired movement of the ring and little fingers, attributed to involvement of the flexor tendons in the cicatrix; and at the same time the seat of the scar was exquisitely sensitive, especially at one point, which, on being touched, gave rise to acute pain, radiating into the fingers named. Every movement of the hand was painful; and at first the pain was thought to be due to the presence of a foreign body in the wound. An exploratory incision failed, however, in discovering any such cause for the irritation of the nerve, and the patient's condition remained much the same, until, about a year after, Paul Vogt dissected out the ulnar nerve from the cicatricial tissue surrounding it, and, raising it out of its bed, practiced stretching the nerve in both directions. The operation was immediately followed by the disappearance of the neuralgia, and in a few weeks the movements of the hand and fingers were re-established. There was no recurrence of the symptoms three years after the operation. The second case is related by Petersen, in which an extensive wound of the upper and inner part of the left leg was followed, on healing, by very severe attacks of deep-seated pain, again suggestive of the presence of some undetected fragment of metal with which the wound was inflicted. In this case also no foreign body was found on cutting down upon the injured limb, but Petersen ascertained that the posterior tibial nerve was very sensitive, and that there was some extravasated blood in its sheath. Stretching was practiced, and with the same fortunate result as in Vogt's case.

BROMIDE OF LITHIUM.—Bromide of lithium, introduced into therapeutics some years since, is doubly valuable since it acts with equal energy as a sedative and a lithotriptic. In fact, its richness in bromine, 91.95 per cent., is very much superior to that of the other bromides, and its 8.05 per cent of lithium is sufficient to neutralize a considerable quantity of uric acid, as one part of lithium neutralizes four parts of uric acid.

Thanks to this double action, demonstrated both in the Paris hospitals and in civil practice, the bromide of lithium is vulgarly prescribed for the neuroses on the one hand, and on the other for the various manifestations of the uric diathesis. Experience, indeed, has demonstrated its powerful effects in epilepsy, chorea, insomnia, hypochondria, and, in the diverse forms of the uric diathesis, such as gravel, nephritic colic, gout and diabetes.

In these last affections which are accompanied by the symptom pain, as in nephritic colic and gout, bromide of lithium, besides its lithontriptic action, acts also as a sedative and calms in a few hours the suffering of the patients.

In this special relation the bromide of lithium is a most valuable remedy in therapeutics and cannot be too much recommended to physicians.—*Presse Med. Belge* (*La France Medicale.*)—*The Journal of Nervous and Mental Diseases.*

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Original Communications.

CHRONIC AURAL CATARRH.

A PAPER READ BEFORE THE ACADEMY OF MEDICINE, OCT. 30, 1877.

BY C. A. SIMPSON, M.D., ATLANTA.

Mr. President:

The subject I have chosen for this paper is chronic aural catarrh. The seat of this annoying trouble is the mucous membrane of the cavity of the tympanum and eustachian tube. Of all the tissues of the body, the mucous membrane, from its vascularity, its exposed situation to various kinds of irritants, and its peculiar susceptibility to irritating influences, is most frequently affected with acute and chronic inflammation. The mucous membrane of the eustachian tube and middle ear being a continuation of that of the pharynx, and from the readiness with which inflammations extend along mucous tracts, the pharynx is the starting point in most cases of inflammation of the tubes and middle ear.

Two varieties of catarrh are recognized—sclerosis, or dry catarrh, in which the membrane has become thickened and inelastic, and moist catarrh, in which there is a congestive swelling, with increased secretion of the mucous membrane. Catarrh of the tube is described separately from catarrh of the middle ear, but in practice it is not always possible to make this distinction, as they are both so frequently affected at the same time.

Chronic aural catarrh is by far the most frequent cause of deafness for which the physician is consulted—almost every patient presenting himself with a history of gradually increasing deafness, beginning he hardly knows where, and with little pain, except when "he takes fresh cold and is troubled with chronic aural catarrh." The two other most frequent causes of deafness are impacted wax and acute inflammations. The acute inflammations (suppuration) are much more painful than chronic aural catarrh, while neither in it, or in the case of impacted wax, is there the history of gradually increasing deafness. Deafness from impaction of wax, if in only one ear, is frequently discovered suddenly, and probably accidentally.

A patient, consulting me for deafness in his right ear, stated that he was not aware that he was deaf in the right ear until he happened to close the left. Upon examination of the ear, I found it filled with wax, after the removal of which, and inflating the middle ear a few times, it was completely relieved.

In most cases of chronic aural catarrh, the patient seeks relief simply for the deafness, in one ear or both, though some are greatly annoyed by the noise in the ears, and are thankful if they can get relief from that alone.

There is a history of frequent colds in the head, and sore throat, and after each attack the hearing is worse. The mucous membrane of the pharynx is congested, and secretes a thick, glairy mucus.

Besides the symptoms mentioned, the diagnosis of chronic aural catarrh is made from the appearance and position of the membrana tympani and condition of the eustachian tube. The membrana tympani can be readily examined by means of a concave mirror, two or three inches in diameter, with a focal distance of five to six inches, and an ear speculum, either of silver or hard rubber. The best position for the examination is for the patient to be seated opposite, and with the side to, a window, while the examiner is seated on the other side, and examines the ear with reflected light. By drawing the ear upwards and outwards with the left hand, to straighten the canal, the speculum is readily introduced with the right. Now, by holding the speculum in position with the thumb and first finger of the left hand, and pulling the ear upwards and outwards with the second and third fingers, the light from the window is readily thrown into the ear, so as to illuminate the drum.

The normal color of the membrana tympani, as described by Politzer, is a "neutral gray, with the addition of a weak tint of violet and light brownish yellow." There is, however, a considerable variation of this neutral gray in the membrana tympani of those whose hearing is normal. The drum is translucent, and the normal gray, which is partly due to light passing through the drum, may be changed to a darker gray, with more or less mixture of yellow, due to thickening of the drum. The drum is usually drawn far inward, and has lost its brilliancy, and the normal triangular light spot may be cut up into several pieces, or reduced to a fine line or point.

In persons with a normal degree of hearing, the appearance of the drum varies considerably, and you may see the light spot vary greatly in size. The light spot depending upon the position of the drum, any variation in its normal degree of concavity produces a difference in the size or shape. When the drum is drawn very far inwards, it becomes a fine point or line.

An important means of diagnosis, as well as treatment, of affections of the middle ear, is by air forced through the eustachian tubes. The methods used are the Valsalvian and Politzer's, with or without the eustachian catheter.

The Valsalvian method consists in the patient closing the nose and mouth and expiring forcibly, when the air rushes along the tubes to the ear. In Politzer's method, a rubber air bag, with a nozzle attached, is used. The patient takes a mouthful of water in the mouth, the nozzle is inserted in the nostril, and the nostril firmly closed around it, so as to prevent the exit of air, the patient is told to swallow, and at the instant of swallowing, the air-bag is forcibly pressed with the right hand. The act of swallowing opens the mouths of the eustachian tubes, and the air is driven to the middle ear.

The catheter is a very important means of diagnosis and treatment, and, in most cases, is easily introduced. The patient should be seated opposite a window while the operator stands. While the left hand is on the back of the head so as to steady it, with the right the curved point of the catheter is inserted into the inferior meatus of the nose, the catheter being held in a vertical position; it is then raised to a horizontal position and pushed along the floor of the nasal cavity, until the point touches the posterior wall of the pharynx; the instrument is then drawn one-third to three-fourths of an inch backwards, the outer end slightly elevated and the point turned upwards and outwards towards the ear, when it usually enters the tube. There is usually little or no pain produced by the introduction of the catheter, there being only a disagreeable tickling sensation.

Air may be forced through the tubes either from the lungs of the physician, through a rubber tube attached to the outer end of the catheter, or with the air-bag. The permeability of the tube, and the condition of moisture or dryness, is indicated by the ease with which the air passes along the tube, and the sound produced by the air-douche upon the drum, as it may sometimes be seen to bulge out at each inflation, while in others, from the want of force on the stream of air, or adhesions in the middle ear, the concavity of the drum is not changed. By means of the otoscope we may hear the air strike against the drum.

The prognosis in chronic aural catarrh may be considered as favorable, that is, most of the cases presenting themselves are either cured or considerably improved. We must take into consideration the duration of the trouble, the changes and adhesions that may have taken place in the drum and middle ear.

Troltsh says in reference to changes in the drum: "If the appearance of the membrana tympani indicates partial and circumscribed morbid changes, especially of an adhesive nature, and if it is of a whitish color, the result of treatment is more unfavorable than the other condition, that is, the age and general conditon of the patient, duration and degree of the affection, would indicate at the first glance." He also believes, "when large spots of calcareous degenerations appear on the drums the prognosis is unfavorable."

Politzer gives an unfavorable prognosis in cases where there are continuous noises in the ear, and even if there is an improvement in the hearing it will not be permanent.

Swartze says: "There remains nothing but the test of treatments. If a local treatment persisted in carefully and rationally for a period of from eight to fourteen days, has no effect either upon the hearing, or the unpleasant sensations of the patient, any further treatment will probobly be of no avail."

The *treatment* of chronic aural catarrh is usually local, application being made direct to the mucous membrane of the tube and cavity of the tympanum by means of the catheter and Politzer's air-bag.

In many cases where the trouble is not of long standing and is confined principally to the tube, the forcing in of air alone produces an immediate and marked improvement in the hearing. It acts mechanically in opening the tube, and breaking up adhesions in the cavity of the tympanum.

The medicinal agents used in the treatment of chronic aural catarrh are the various irritants and astringents, used both in solution and in the form of vapor.

Those most used are the vapor of hot water, chloride of ammonium, in vapor and in solution (10 to 40 and 60 grains to ounce) vapor of the carbonate of ammonium, iodine, iodide of potash, (10 to 60 grains to ounce) sulphate of zinc, (1 to 10) liquor potassæ, etc. The agents may readily be forced into the middle ear by means of the catheter and Politzer's air-bag. Not more than fifteen to thirty drops of a solution (always warm) should be used at one injection, and repeated if it does not enter the middle ear. The more irritating of them sometimes produces considerable burning pain for a little while. I have used most of these, and believe I have had better results from the chloride of ammonium, twenty to forty grains to the ounce, than anything else. Blisters in the region of the ear, I believe, are useless and only annoy the patient.

The pharynx almost always requires attention, as there is considerable pharyngitis. If there is much congestion solution of nitrate of silver forty to sixty grains to the ounce, may be applied, by the physician, every day or two, to the pharynx. Any part of it may be reached by a curved probang. Gargles, also, of sodium, in solution, alum, chloride of sodium, etc., are useful.

Some patients in addition to the local will require a general treatment with cod liver oil, iron, etc.

BOTANY, IN ITS RELATIONS WITH MEDICINE—No. 2.

BY W. T. GRANT, M.D., ATLANTA, GA.

It must now be admitted that the remedies which are furnished to the physician by chemistry are quite as valuable as those which are derived from the vegetable kingdom. I mean, when I speak of the chemical medicines, those which are derived from inorganic nature by the chemist's art. Even admitting this much, the superiority must be awarded to botany, for the reason that, while the really excellent inorganic medicines may be counted on the fingers, the others can only be numbered by the hundreds; and this, too, in face of the fact that the study of chemistry has of late years received an extraordinary impetus, while botany has been entirely ignored.

It seems to me that, while neither of these sciences should be tabooed, that they should go hand in hand ; and I cannot but believe that, together, they will constitute a power, or resource, to which the physician may confidently appeal, in any extremity. The harmonious working of the two sciences, and their great results, are shown in the fact that botany pointed out the cinchona bark, and chemistry extracted the quinia and other alkaloids for the convenient use of the physician. Botany presented the poppy, and chemistry took the inspissated juice (opium) and gave us the morphia from it. They are thus complementary, the one to the other ; and the science of medicine can never be complete until they shall both receive a full share of the physician's attention.

Of the two sciences, botany is far the easiest to learn, and involves literally no expense beyond the purchase of less than half a dozen books. It would be the height of absurdity to expect all the students who graduate in medicine to be competent chemists. If they comprehend the very general principles of the science, it will be as much as is expected of them. But with botany the case is very different. No preparation is needed, no expensive apparatus to buy—nothing is to be done but study and use common sense. In botany, the objects of study are all around us, requiring little labor to gather, and very little to understand. So that it is entirely true, that there is no comparison whatever between the two sciences in ease of acquisition or in convenience of material. Botany is easy to acquire, and simple; chemistry difficult and complicated. The objects of botany are at every man's door, while the materials for chemical studies are expensive and sometimes difficult to procure.

Reasoning from such a comparison, the conclusion is easy, that while it is no difficult matter for every student of medicine to become a good botanist, exceedingly few ever can or will become good chemists. And it seems to me that this is only consistent with the "eternal fitness of things," as there is no need that all *should* be chemists, a few good chemists being entirely sufficient; whereas, it is not only important, but very essential, that *every* physician should be a good botanist. Only in this way can we have a sufficient number of properly qualified observers in the field studying our flora.

I do not wish it understood that I would disparage the study of chemistry in the least particular. Such is far from my intention; it is a valuable auxiliary to the physician in his combat with dire disease, and I render to it every credit to which it is entitled. I have instituted these comparisons only to show that the profession only stultifies itself, and rejects one of the most invaluable aids as long as botany is ignored. I would not banish chemisty from the curriculum of our medical schools, but I would introduce botany there, so well satisfied am I that it would repay tenfold value for the attention bestowed upon it, and add quite as much to medicine as any other one in the family of the medical sciences.

Botany has been too long ignored by the regular profession, and left in the hands of charlatans. And it has now become essential that it should be taught in every medical college, if we would have materia medica and therapeutics advance equally with the other branches of medicine. And that college which shall first establish a chair of botany will not only receive but deserve the plaudits of the future. Independently of all this, the value of a course of medical lectures which includes in its course a well taught series upon botany will attract to itself and retain large numbers of students who have the ability to recognize the fact that no medical course can possibly be complete which does not embrace botany in its curriculum. And every first course student will make that institution his *alma mater*, because he cannot acquire similar advantages elsewhere.

I know of no medical institution anywhere, not even those which claim to be botanic par excellence, that teaches botany. If there be such an one, I know nothing of it. I have never yet met a graduate of any institution whatever who had any knowledge of practical botany.

As is said in another part of this essay, we have excellent physicians and some very good botanists, but it is essential that the two should be combined in one man before medicine can ever expect to reap the rich harvest of remedies which is ripe for the sickle. This necessary combination is very like the combination which is absolutely necessary in the great astronomical discoverers. There he must unite the astronomer proper with the mathematician, before he can expect to make any grand discovery. So in this case, the physician must also be a botanist before he is qualified to take hold of, and deal with any of the great problems which may be found within the province of materia medica and therapeutics.

Independently of the great results which must necessarily accrue to our profession so soon as every physician shall become a botanist, it seems to me that it would be a great pleasure and satisfaction to the practitioner to possess a competent knowledge of this subject.

I have no doubt but that many valuable discoveries of remedies have been suppressed, just because the physician did not know the proper name of the plant he may have used in the particular case. I once read an article by a competent physician, in which he recommended a strong tea of the "cow-nettle-balls," in puerperal convulsions, as a very reliable remedy. Probably very few readers of his paper at a distance would know what he meant. But if he had said that he had used the ripe fruit of solanum carolinianum then a reader in Europe could at once have put his finger upon the plant anywhere it might grow.

ATLANTA MEDICAL COLLEGE CLINIC—SERVICE OF PROF. J. G. WESTMORELAND.

REPORTED BY S. W. JOHNSON.

October 9, 1877.—Charles Glasgow, colored, æt. 37 years, formerly porter for a wholesale dry goods house, but now unable to do any work.

Patient states that the first of last year he had a sore on the penis, which continued for about one month. The usual secondary symptcms of syphilis, which generally appear about the second or third month, such as sore throat and eruptions of the skin, are not remembered by the patient. He now exhibits an ulcer, with enlargement of the upper part of the sternum, and another over the lower part of the lumbar spine. These, as you observe, are of the indolent chronic variety, evidently the result of syphilitic contamination.

The irregular treatment he received was not sufficient to rid the system of the virus, and now he is the subject of tertiary symptoms. These are often deferred for a much longer time after the disease is contracted. Very often five and even ten years are required to develop the condition we here find produced in less than two; and from the history given, it evidently appeared after the lapse of less than one year. It appears from his statement, and from the clinical records, that last winter he was treated in the surgical clinic of this college for tertiary syphilis. Although the patient has no recollection of any difficulty which will answer for secondary symptoms, it is by no means certain that he did not have them. A sore throat and eruptions of mild character may have existed without impressing the patient with their importance sufficiently to remember them.

The treatment instituted last winter in the surgical clinic, though, as appears from the history, beneficial in moderating the symptoms, was not continued sufficiently long to give decided relief.

This period of the disease is subject to the same constitutional or elective treatment as the former stages, except that the quantity of iodine must be much larger in each dose; whereas, ten grains make the usual dose in the secondary stage, forty and even sixty to eighty are required in the tertiary. Mercury, which had, until recently, gone out of use in this stage, is now being used exclusively by some, and in very small quantity. An amount little above the homœopathic dose is given regularly for a year or two, with the effect, it is said, of giving immunity against the reappearance of tertiary symptoms. While we are not inclined to rely on this remedy to give prompt relief from the pain and ulceration we frequently find in this stage of syphilis, we must admit that recent investigations have proved that mercury has action not before known; and as it has, from time immemorial, been used with the prospect of success in the primary stage, as we suppose with the effect of eliminating the virus, why may it not do the same at any stage? This remedy has been withheld in the tertiary stage, under the belief that it impoverishes the blood, and, therefore, should not be used when the system requires building up, as is supposed to be necessary under such circumstances. It has been demonstrated, however, by recent experiments, that while fibrine in the blood may be lessened, the red corpuscles are always increased by small doses of mercury. If this be true—and we do not feel warranted in denying it—there is not the danger from impoverishment that the profession suspected.

Another question, gentlemen, to which I invite your attention, and which I propose to settle as far as possible in the treatment of this and other cases, is, whether other preparations of iodine are equally efficient in the relief of tertiary symptoms, as that of the iodide. My opinion is, that iodine is the catalytic or destroyer of syphilitic virus, and that in all probability the tincture will answer the purpose. With the view of testing the correctness of this theory, I propose to use the tincture exclusively in this case. We will suppose a drop of the tincture about the equivalent of one grain of the iodide, and prescribe it accordingly. There has been objections to the administration of large doses of the tincture, on account of its supposed poisonous effects, manifested in a burning sensation of the stomach, stricture of the fauces, etc., but I think we shall be able to satisfy ourselves that when properly diluted no such difficulty will exist. The patient will probably attend the clinic regularly for some time, so that the effect of this preparation of iodine may be witnessed. I make the following prescription:

℞.—Tinct. Iodine.
Whisky, ... aa. f ℥j.
Mix.

S.—One teaspoonful three times a day, in a half pint of water.

In this dose, about thirty drops of the tincture will be taken, and the half pint of water will sufficiently dilute it to prevent any seriously injurious or unpleasant effects upon the stomach or throat.

The mixture with whisky is ordered in order to make the dose amount to a teaspoonful, thereby avoiding the trouble and uncertainty of dropping every time the dose is taken, and to preserve the solution, which would be interfered with by mixing the tincture with water instead of whisky.

Oct. 15. The patient reports unpleasant sensation in the stomach and throat soon after taking the dose prescribed on the 9th inst., but has continued its use, notwithstanding. Now, in order to obviate this difficulty, I require him to take an additional amount of water after swallowing the half pint mixture. The amount of iodine will also be increased, as in the following:

℞.—Tinct. iodine, ... f ℥jss.
Whisky, ... f ℥i.
Mix.

S.—One teaspoonful three times a day, in half pint of water, followed by an additional drink of water.

Oct. 22. The patient reports freedom from the unpleasant effects of the iodine upon the stomach and throat, since an additional amount of water was directed, notwithstanding the increased quantity of the remedy in the dose.

I shall now still further increase the quantity of iodine, and instead of whisky to make up the teaspoonful, shall use the tincture of gentian, which will equally well preserve the perfect solution, and at the same time invigorate the stomach. The following prescription affords about forty-six drops tinct. iodine at the dose:

℞.—Tinct. iodine, ... f ʒiij ss.
Tinct. gentian, ... f ʒi.
Mix.

S.—One teaspoonful three times a day, in half pint of water, followed by a few additional swallows of water.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

ATLANTA, GA., October 23, 1877.

Society met, Dr. V. H. Taliaferro, President, in the chair.

On the call for reports of cases,

Dr. W. F. Westmoreland mentioned that of a boy seven years old, from Spartanburg, S. C., who had been a sufferer for five years with stone in the bladder.

Three days since, the operation of lithotomy, for its removal, was made, and a rough stone, one by three-fourths of an inch, was extracted. The disproportion between the size of the stone and the parts of the child concerned in the operation, was such that it was with difficulty removed from the bladder without lacerating the perineum. The stone was exhibited as one of unusual size, found in the bladder of a child so small.

He also exhibited a pathological specimen from the case of necrosed maxilla reported at the meeting of 9th inst. The peculiarities of the piece of necrosed bone presented, to which he desired to call attention, were the excessive hardness of the specimen, and its resemblance to some preparation of iron, in color and general appearance.

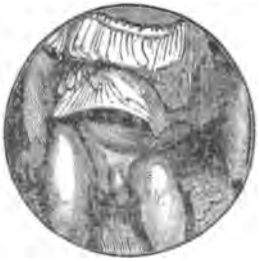
Dr. Baird called attention to the subject of hysteria, and mentioned a case recently treated by himself with chloroform, by inhalation, in which unconsciousness and semi-coma were prominent symptoms. He found the remedy successful in rousing the patient from the unconscious state, and thinks such nervous condition may generally be promptly relieved by this means.

Dr. Todd asked whether any member had recently met with scarlatina in his practice. None answering, he reported the case of a child affected with this disease, in which, besides the usual symptoms, that of urticoria was prominent, and, for sometime, very distressing to the little subject.

The President, Dr. V. H. Taliaferro, reported a case of infantile masturbation, and said:

I was first called to see the babe some two months ago, on account of the mother's anxiety respecting the genito-urinary organs. From her previous statement to me, I expected to find some malformation, or strikingly abnormal condition of these parts. Upon examination, however, I found what appeared to be simply on unusual development of the penis and testicles. I then gathered from the mother what I conceive to be a most remarkable infantile history. Although I regarded the mother a lady of veracity, I was unwilling to accept in full her mournful statements concerning her babe, without verifying them, to some extent, by personal observation, which I subsequently did, in company with my friend, Dr. J. T. Johnson, whom I had solicited to see the case.

The history given me by the mother of the babe is as follows: Age, nine months; second child; weight, at birth, five pounds, with full winter dress; born at term; tall enough, but very thin and lean; appeared to be well, and as active and vigorous as is usual with children at birth. During pregnancy the mother had been impressed with the idea that something would be wrong with her child, and immediately inquired, at its birth, if it was all right. Upon her recovery from a serious attack of sickness of some weeks duration, she again inquired as to her child, and was told by her medical attendant (homœopath) that there was a "little something wrong." Her anxious inquiries elicited the statement that there was "a malformation." Inquiring earnestly as to the nature of the malformation, she, by her doctor, was told that there was "an unusual development of the penis, and, if he lives, will be a great rascal." The so-called malformation was made the subject of frequent remark and discussion by the nurse and lady visitors to the lying-in chamber. The result of these discussions was, that the child was destined for *a great scamp.* Passing through the usual ills of baby flesh, in the way of "hives," jaundice, thrush, etc., up to the age of five months, he began testing the powers of his genitals by what his mother termed "teasing himself." This *teasing*, at first very occasional, and usually early of mornings upon awaking, became more and more frequent until, now, its mother has become distressed and alarmed, and hence her appeal for medical advice. She states that the *teasing* was done by working the legs while he lay upon his back. She stated that these acts were attended with great excitement and evident enjoyment, and with *complete erections of the penis.*



The wood cut is made from a photograph when the child was ten monts old, at which time he had been masturbating five months, and certainly quite an adept at the business. It will be seen that the genital organs are out of all proportion to his size and age. The glans is large for the penis, the prepuce rolls back, leaving the glans completely and constantly uncovered. The testicles occupy the scrotum—are large and pendulent. For some two or three months, he suffered from teething and diarrhœa, from which he became greatly weakened and emaciated, in the meantime keeping up his habit with increasing energy and industry. With an improvement of his health, which, for the past few weeks has been decided, the acts of masturbation have been less frequent. He now is quite playful, and amuses himself with his toys, crawling over the floor, etc., and, as his mother says, "forgets to tease himself," but if, by any accident, his attention is drawn to the penis, or he ceases his plays, he at once falls on his back and commences vigorously his favorite amusement. A crying spell always ends, if left to himself, in masturbation. The frisking motion of the legs seems to call his attention to his old habit, and at once the whole expression of the face is changed from that of pain and distress to one of enjoyment.

At my solicitation, the child was brought to my office for the purpose of witnessing, if possible, the act and the manner of the masturbation.

Dr. T. J. Johnson was present by invitation to witness the strange procedure. The child was placed on his back upon a table, and at once commenced crying and looking towards his mother, as though he wished to be taken up. In a little while he ceased crying, and commenced a rather rapid motion of his legs, with the thighs flexed upon the abdomen, and the knees crossed, one over the other. The motion of the legs was not an irregular jerking, but a systematic regular movement, rather transversely to the pelvis, the knees well crossed. In a little while after commencing his movements, we noticed that he gathered, or rather spasmodically clinched, his napkin with one hand, and drew it tightly. This, he evidently had learned, to make the greatest possible amount of friction upon the penis. As he proceeded with the act he seemed to become thoroughly absorbed in its vigorous execution. With his head rigidly thrown back, the eyes rolled up, lids partially closed, mouth wide open, and jaws rigid, cheeks intensely flushed, perspiration bathing his forehead, and with each rapid and quick motion of the legs a grunt, we had presented to us a novel scene, and certainly one of considerable interest, both in a physiological and pathological view. Removing his napkin, so as to expose the penis, we found a tolerable degree of erection. His movements were continued without the napkin, apparently much to his annoyance. The mother stated that the degree of erection witnessed by us was nothing like so rigid as was usual with him when left to himself. At this time the child was in delicate health from teething—very feeble, and quite emaciated. Since, however, his health has greatly improved, and he is now quite well—is bright, cheerful and very playful. His photograph was taken very soon after the visit spoken of to my office, now some six weeks.

Have we here simply a physiological or a pathological conviction? My own opinion, from a rather careful study and observation of the case, is, that it is purely physiological, and the result of premature development of the genital organs. I will be glad if Dr. Johnson will state to the Academy his observations and impressions of this case.

I will here state, that upon careful inquiry into the family antecedents, I learned that the mother had an unusual development of the clitoris, and that an uncle was possessed of extraordinary development of the penis, which, in childhood, had given some anxiety and trouble. It was owing to these peculiarities that the youthful mother apprehended something would be wrong with her babe.

In answer to the question whether acts of masturbation were frequent, Dr. T. replied that they were repeated as often as occasion or convenience afforded—perhaps several times during the day. To the question, whether any discharge occurred during the act, he replied that the mother reported an occasional discharge of clear, tenacious fluid, supposed to be mucus.

Dr. Todd remarked that he had seen in some medical work the report of several cases of this kind. One he remembered was about ten months old. The treatment consisted of cold water and bromide of potassium. In one case the habit was discontinued on changing the nurse.

Dr. Baird thought that bromide of potassium is not the proper remedy for this habit in such precosities, as the influences that prompt the act are more physcal than mental in their character. He thought that contact of the thigh with the precociously developed penis excites the disposition, and leads to the habit in question. Bromine, acting as it does upon the brain, lessening its hyperasthesia, will thereby lessen the venerial desire in the adult. Not so in the case under consideration, where the origin is evidently mechanical. He thought such mecanical means as will prevent touching or friction will be more useful than brain tonics or sedatives.

Dr. Todd thought this strange precosity has intimate connection with the organs of the mind—that no such disposition could exist, nor such habit indulged, from mechanical cause alone.

Dr. W. F. Westmoreland agreed in the main with Dr. Baird, and thought the case reported by Dr. Taliaferro was not one of masturbation proper. In the adult the discharge of semen constitutes the habit and source of detriment. Friction, mechanical entirely in character, is evidently the cause of the practice in this case.

ATLANTA, February 30, 1877.

The Academy met, Dr. V. H. Taliaferro, President, in the chair.

On the call for reports of cases,

Dr. Todd alluded briefly to a case of obstruction of the bowels, to which he was called in consultation with Dr. Hart, of Cross Keys. As reported to him on arrival, the patient's bowels had not been freely evacuated in about three weeks. He was, at the time, suffering very much with pain in the abdomen, and had frequent attacks of vomiting. In the right illiac fossa there was considerable prominence, and general fullness of the whole abdomen. The abdominal enlargement seemed to depend on watery and solid accumulations, without evidence of collection of gas. He had taken castor oil and perhaps other cathartics; also an attempt at injecting fluids into the rectum and colon had been made, with poor success, owing to seeming pressure upon the pelvic viscera by the accumulations in the bowel above the obstructed portion, as was supposed, falling into this dependent position. The pulse was frequent, numbering 130.

In the consultation he advised the introduction of a large male catheter through the rectum, in order to fill the colon below the supposed stricture or impaction. It was found, however, that only about two pints of water could be introduced before such intense suffering was produced that they were forced to desist from further attempts to force more. He had previously taken morphine by the mouth in one-fourth grain doses, which was now repeated hypodermically in the same quantity. They concluded to continue the opiate occasionally, and the injection as often and in as large quantity as could be borne without too great suffering.

A letter was read from Dr. Hart, written a few days after Dr. Todd's visit, giving the gratifying intelligence, that after continuing for two days the course of treatment agreed upon, and commenced before the consultation ended, fecal discharges commenced and continued to the thorough emptying of the canal, and perfect relief of the patient.

He desired to call attention to another case, having also a fullness amounting to a tumor in, or just above, the right illiac fossa, supposed at first to depend on impaction of the cœcum and ascending colon with hardened feces. He was led to this suspicion from the number and character of scyballa discharged from the bowels after injections. Symptoms, however, were soon developed which proved that an abscess in the abdominal wall gave rise to the tumor. Finally it was opened, and discharged a large quantity of pus.

Dr. Baird desired to know where Dr. Todd supposed the watery accumulation, alluded to in the case first mentioned, was contained—whether in the cavity of the peritoneum or in the bowels? Dr. Todd answered, in the small intestines.

The President, Dr. Taliaferro, in connection with the case of obstructed bowels reported by Dr. Todd, advised the use of ox gall in obstruction from hardened or impacted fæces. He is in the habit of using it for accumulation in the rectum, in cases subjected to operations on pelvic organs, requiring the lower bowel to remain quiet, causing an accumulation of fæces in the rectum difficult to discharge. In such cases, the remedy is injected so as to come in contact with the hardened mass, and, according to his experience, readily softens it, so that it may easily pass from the bowel. He also referred to the use of melted lard, taken into the stomach, as a means of relieving obstructions to the passage of the contents, from unknown causes. He alluded to a case in which he was recently called in consultation, that recovered after this plan of treatment had been adopted, at the instance of Dr. Pinckney,

Dr. King alluded to the use of air injected into the colon for the relief of obstruction from intussuseption or stricture of any kind. He is of opinien that air may be injected readily, and will more perfectly and speedily dilate the bowel, so as to relieve any difficulty in which water has proved successful, and much more certainly.

Dr. Calhoun invited the attention of members to the unusual prevalence of hemorrhage of the retina. Whether the season or peculiar condition of the atmosphere led to it, he is not sure. He had met with several cases recently, in which the hemorrhagic disposition in this part seemed to continue longer than usual—the absorption taking place speedily after the blood was effused, and in a short time reappearing. In some instances temporary blindness resulted from the exuded blood. He is aware of the fact that lying-in women are frequently the subjects of this derangement, but it is in that case probably the result of parturition. This difficulty is, he thinks, sometimes the cause of permanent blindness in old persons, and not unfrequently terminates in apoplexy in such subjects.

Dr. Simpson reported a case of obstruction to the passage of fæces though the bowels, he supposed somewhat similar to to that mentioned by Dr. Todd. The patient, an old lady some seventy years of age, was taken on Saturday, the 30th inst., with abdominal pain and constipation. At first an opiate was given, with only temporary relief, and was followed by bismuth, soda and ipecac. The next day the same was repeated, with calomel and injections additional, which gave comfort, and was continued at intervals till Tuesday, when fever and pain came on, and, in consultation with Dr. Logan, large injections of water in the bowels, and oil of turpentine by the stomach, with opiates, were used. On Wednesday, the fifth day after the attack, there was fulness of right hypochondrium and general abdominal distention, pain and fever. No thorough evacuation was produced, and the patient's strength rapidly failing, she died late in the afternoon.

Dr. Todd, calling attention to the case of precocious masturbation, reported at the last meeting, said that since his attention had been called to the case by Dr. Taliaferro, he, in looking at the literature of the subject, came across the following in the *National Medical Journal:* "Transactions of the Medical Society of the District of Columbia. Precocious Masturbation. February 16, 1870. Dr. Thomas Miller related the following case of a child ten months old, who exhibited the precocious tendency of rubbing itself, and compressing its penis, until it produced a regular orgasm. But little attention was paid to the fact at first, as it was only noticed occasionally; but a month later the act had been repeated twice in fifteen minutes, and the orgasm lasted for at least a minute, leaving the child as relaxed as if it had been an emission, but which did not take place—with perspiration on the brow, pale lips and hurried breathing. At the commencement the penis would become perfectly erect, and at its close would relax and fall. The child passed urine in a free stream, in the Doctor's presence, and soon after commenced the excitation by pressing its abdomen and crossing its legs. On recovering, it played around, and in fifteen minutes time repeated the act, which almost amounted to a convulsion. The child was well developed, healthy and hearty, with a good wet nurse. He thought the brain might be affected, and gave grs. ij of potass., bro.

ter die, and cold ablutions to spine as often. Whenever the impulse was noticed cold water was applied to the pubes, and the child gradually lost the habit. Three or four days ago the habit was not practiced oftener than once in forty-eight hours, and it has no longer frequent erections. He did not examine the bladder or urethra, but there was an elongation of the prepuse, the bowels were open, and the appetite good. It sleeps alone on a hair mattress and pillow. Its nights were restless before taking the medicine, but the act was never committed until after the warm bath in the morning. The nurse was not allowed to indulge in stimulants. The earliest cure he had before seen was in a child of six years, with a large penis and emissions.

Dr. Antisell thought the case might be as well referred to reflex irritation of the spinal cord as of the brain.

Dr. Hall thought that the condition of the spine ought to be carefully noticed in such cases, and mentioned the case of a gentleman who, when recovering from a case of protracted sickness, and very much emaciated, while lying upon a sofa, upon his back, suffered from frequent emissions, and found that a thick welt in the pantaloons, pressing upon the spine, was the cause.

March 9.—Dr. Miller reported that the child had almost stopped the habit, now making its attempts only once in two or three days. After one of its orgasms, a *mucous discharge* had been noticed. He was at present using a stimulating liniment to the spine.

October 10, '71.—Dr. Miller states that he continued to attend the child for a year after the first report, and that the child had entirely recovered. The use of the bromide of potash and the ointment was continued for several months. A French nurse was employed by the family, who, at the Doctor's suggestion, was discharged, soon after which the habit subsided. Circumcision was proposed, but rejected by the parents.

Dr. Busey had seen a report by Vogel of masturbation in a female child of eleven months.

In the mortuary tables of the Leeds Infirmary, Dr. Fothergill, of England, reports a death from excessive tittillation of the clitoris in a child twelve months old.

Atlanta, Ga., Nov. 6, 1877.

The President, Dr. V. H. Taliaferro, in the chair.

The call for reports of cases was first answered by

Dr. E. L. Connally, who said he had recently under treatment a case of diphtheria in a child of five years old. The characteristic pseudo-membrane was distinct on both tonsils, and the usual eruption on the skin remained for about four days. The case not having alarming symptoms, no other treatment was found necessary than chlorate of potassium as a gargle and aperient cathartics.

Dr. Todd alluded to the case of scarlatina reported by him at the meeting of 23d ultimo, and stated that the further progress of the case and concluding symptoms confirmed the diagnosis. Desquamation occurred, as usual in this disease, after convalescence.

Dr. Baird reported a transverse fracture of the femur, three inches above the knee, in a lad fourteen years old. For six days the limb had been confined in splints consisting of four short boards extending the length of the thigh, and one long splint extending from the buttock, where counter extension, in some degree, was afforded, to a point beyond the foot. This was intended to keep the limb steady, while extension was kept up by a weight and pully, the foot being raised a little above a level with the body. The support to the limb thus afforded not being at all satisfactory, the plaster of Paris bandage was applied, with the effect of retaining the fractured ends in perfect apposition, and the whole limb in a comfortable condition. The position could be changed at will, without disturbing the fracture, and the patient thus saved from the discomfort of confinement to one posture. So perfect is the support afforded, that the patient might probably walk on crutches without detriment.

Dr. Wilson asked the comparative value of vanilla with that of plaster of Paris bandage in fractures.

To which Dr. Baird replied that he did not have any experience with the former, and was entirely satisfied with the support afforded by the plaster. He could conceive of great advantage over vanilla and starch, in the rapidity with which plaster of Paris dries and becomes firm.

Dr. Taliaferro remarked that an inspection of Dr. Baird's case impressed him with the advantages of plaster of Paris bandages, and that he was delighted with the firm support afforded, allowing the patient to move readily without disturbing the fracture.

Dr. Connally thought that vanilla having greater strength and durability than plaster, may therefore be preferable in some instances.

Dr. Wilson thought vanilla preferable on account of lightness and superior strength; the only disadvantage being the length of time required for drying.

Dr. Logan called attention to his treatment of dysmenorrhœa, the result of flexions, by the use of short cloth tents, as reported to the Academy on the 16th ultimo. Recent report from the patient thus treated confirms his good opinion of the plan, and encourages him in the hope of relieving others by this means.

Dr. J. G. Westmoreland reported a case of imaginary continuance of disease which had long since subsided. A young man had contracted gonnorrhœa more than a year ago, and, from the history given, was relieved in the usual time. The great anxiety and concentration of mind on the subject, however, caused every sensation of pain, or even of slight uneasiness to be magnified in the imagination to the degree of real suffering, and the sufferer considered them evidences of existing gonnorrhœa. The answers to direct questions proved that no symptom of the disease existed, and yet he was a wretched sufferer with imaginary disease, which he supposed had existed all the time. This state of mind had doubtless been induced by the earnest and constant concentration of his thoughts on the subject of his disease, about which he had, from the attack, felt great solicitude. This state of mind amounts to a species of mania, and the case may be denominated *gonorrhœal mania.* The treatment advised was that of convincing the patient that no symptom of the disease now exists; and though he cannot at once accept this as a true statement of his case, yet that he must exercise constant effort to do so, and indulge no thought on the subject of gonorrhœa. Similar cases had been presented to Dr. W. heretofore, which were found somewhat difficult to relieve from the erroneous impression made upon the mind, by intense anxiety and thought concentrated on the disgusting disease. The plan above mentioned, however, he thinks, if persisted in, will genrally succeed.

Dr. Taliaferro had observed this state of mind, caused by the long continuance of chronic disease.

Adjourned.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Regular meeting September 24, 1877. President Brown in the chair.

Dr. McGraw exhibited a vesical calculus, lately removed, weighing 666 grains. The stone was of composite character, the nucleus being of uric acid, while around it were concentric layers of oxalic acid and various phosphates. The patient had been afflicted for years, but his malady had never been fully diagnosticated, probably on account of the extreme difficulty in reaching the stone, which lay sacculated above the pubis.

When the diagnosis was fully determined, the doctor operated by the medio-lateral method, with a straight staff, but was compelled to crush the stone with the lithotrite before he could extract it from the wound. The operation was a successful one, and the patient was nearly well, no urine passing by the perineal wound.

The case had come from outside the city, and this led to the remark that in his experience when a stone did not originate either from paralysis or enlarged prostate, it came from some locality outside of Detroit.

He also exhibited a large sarcomatous tumor, removed from the posterior triangle of the neck. It had involved the glands of that region, and entailed much suffering on the patient.

In its inception it had presented no symptoms of malignancy, which fact gave the doctor an opportunity to state his tendency to a belief in the theory that tumors are of local origin and benign in character, afterwards assuming malignancy. He also believed that early excision of tumors would prevent, by anticipation, this change in type, and thus preserve many an unfortunate from much suffering.

• Dr. Jenks exhibited a tumor weighing seven and a half pounds, taken from the abdomen of a child two and a half years of age. He had first seen the child about ten months ago, with Dr. Leach, who was attending it for some malarial affection. His attention had been called by the mother to a bloody discharge, thought to be from the vagina, but which he now believes came from the bladder; and also to a "bloating" in the abdomen. An examination of the latter plainly revealed the presence of a tumor occupying entirely the left iliac fossa, rising above the umbilical line, and reaching beyond the median line. When Dr. Jenks examined the case he found the abdominal walls freely movable over the surface of the tumor, and fluctuation present.

It very much simulated an ovarian cyst, but a guarded diagnosis was given, as, if such were the fact, it would be a very unusual and remarkable thing.

Several other physicians also examined the child, and all inclined to the same opinion.

The tumor kept growing, the child failed, and recently died.

A post mortem was held, and on cutting down to the tumor, it was found to be encased in a thick, fibrous covering, and to be agglutinated to the intestines, the omentum and the mesentery. Along the spine, in the lumbar region, it was closely adherent, and being cut away from its attachments no kidney was found on that side. It was therefore a tumor of the left kidney. The right kidney, which had been doing the work of two, was healthy, and as large as an ordinary adult kidney. The tumor was then laid open in presence of the society, when its contents were so evidently encephaloid that no doubt was expressed as to its character.

Dr. McGraw then read a paper on "The Excision of the Inferior Dental and Gustatory Nerves, for the Cure of Dental Neuralgia."

Dr. Mulheron mentioned a patient he had recently seen on the eighth day after her confinement. She was then comatose and moribund from meningeal inflammation, but had never slept since her delivery. It was a question with him whether the sleeplessness was a cause or a result of the inflammation.

By inquiry it was developed that the woman had seemed over-anxious about her household affairs, and had a sense of impending disaster, but no solution of the problem was offered.

Dr. McGraw said that within a few days he had been five miles into the country to see a case of typhoid fever, of which there had been several cases in the family or neighborhood. The cause of the disease could be very readily traced to the foulness of the water in the wells of the community. These cases had brought up with fresh interest the whole question of the miserable water supply of the farmers. It was also a question of vital importance to this city how far the butter and milk brought from the surrounding country might be contaminated with foul water, but it is a difficulty he now saw no way of surmounting.

Dr. Shurly said he had been attending a case of typhoid which, in its virulence, resembled the typhoid in the Eastern States. The patient was so reduced that all functions but the vegetative were extinct. He had expected other cases in the same family, but none occurred. He thought the books, especially English works, were too prone to consider typhoid fever purely contagious in character, while he believed there were endemic influences modifying the disease in many instances which were confounded with those of a contagious origin.

Dr. Heaton gave some account of typhoid fever as he knew it in the Lake Superior region, about Keewenaw Point.

On the north of the Point, he said, was the lake, and a little way back from the shore was a high bluff. A little further back, and over the ridge, lay the valley of Eagle river, covered with vast forests. When the mine owners began to clear these forests typhoid fever broke out with great virulence. The Cliff mine alone lost seventy-five men, the majority by hæmorrhage from the bowels. His observation led him to the belief that the fever resulted from a combination of causes, chief among which were the clearing of forests, the digging under old houses, or any enterprise which disturbed the accumulated decay of years or century.

Dr. Jenks spoke of the peculiarity of the water supply of Goderich, and also its remakable freedom from malarial diseases, though it was just across Lake Huron from Saginaw, where those diseases were very rife. They did have typhoid fever, however, and no one doubted that the following was the correct explanation of these facts:

The town lies on high ground, which rises rather steeply from the lake, and there is almost always a strong breeze blowing, which accounts for its freedom from malarial disease.

The supply of water was from wells, which had their source in a layer of gravel above a stratum of blue clay. In the town was a hollow, and it was in this neighborhood that the cases of typhoid occurred, and visitors were always cautioned against drinking from wells in that vicinity. There was no doubt that the water was contaminated by the surface drainage from the surrounding higher land of the city.

After some further desultory talk, Dr. Eugene Smith reported a case of punctured wound of the lens, the instrument being a sharp piece of small wire. The external wound was about a line from the corneo-sclerotic junction, whence the wire traversed the anterior chamber, and pierced the lens. When he saw the patient the aqueous humor had refilled the camber, though there was some blood mixed with it; still the wound in the lens could be seen. Dropped a solution of atropia into the eye, and applied a compress.

Next morning there was marked improvement, the blood being nearly all absorbed, though the lens was cloudy. The treatment was continued for two weeks, when recovery was complete, a most remarkable result, as cataract generally follows injuries of such character.

He also reported a case of enucleation of the eye for trachomatous degeneration. The disease had been called cancer, but he had no difficulty in making a diagnosis, as the neoplastic formation peculiar to trachoma was very marked. He made the operation on account of sympathetic irritation, and was obliged to extend the external angle of the eye by incision, the eyelids had become so contracted, which made the case one of unusual interest.—*Detroit Medical Journal.*

Selections.

Saccharine Diabetes.—A. H., aged 24, was perfectly well until 1871, when he suffered from abdominal colic. He recovered from this attack, and continued well until last December, when he began to grow weak, and to crave food and drink. His urine was greatly in excess. He continued to grow more and more emaciated. He also complained of pain in the right hypogastric region, and of shortness of breath on exertion. I can learn nothing with regard to the boy's parents. He seems to have had a very hard life of it thus far; received blows on his head very frequently when young.

The general and special symptoms of diabetis are well known. The urine is almost always very greatly in excess. The sufferer is obliged to get up frequently during the night, to pass urine. The natural quantity of urine passed in twenty-four hours is about thirty fluid ounces; in diabetes sometimes as much as ten quarts is passed in the same time. In severe cases the quantity is even greater than this—as much as three, or even four gallons during day and night. Excessive diuresis, therefore, is a marked symptom. Saccharine diabetes must be distinguished from Bright's disease or albuminuria. In Bright's disease there is albumen, and no sugar in the urine, and the specific gravity of the urine is, as a general rule, below the normal, about $\frac{1005}{1000}$. Drops and granular degeneration generally accompany the disease. In saccharine diabetes the specific gravity is always above normal—that is, above 1020, the stools are hard and dry, and sugar is always present in the urine. There may be cases of simple excessive diuresis without the presence of sugar. In the present case the urine is very light-colored, slightly turbid, and with a very high specific gravity, above 1033. This boy has passed three hundred fluid ounces of urine in twenty-four hours. His urine contains a large quantity of glucose. In diabetes you nearly always find excessive thirst and craving for food; usually there is a direct proportion between the thirst and the amount of urine passed. The weakness may be excessive before the unusual excess of urine be noticed. In this disease the skin is usually harsh and dry. There is very rarely any sweating. Sometimes the presence of sugar in the blood brings on itching and eruptions of various kinds on the skin. These eruptions are often very difficult to cure. The tongue is red, the throat irritated, and the digestion fails. In later stages it is customary to find a good deal of dyspepsia, with eructions and general torpidity of the bowels. If the case progresses to an unfavorable termination there are evidences of profound mal-nutrition, obstinate diarrhœa, slow, dry gangrene, and inability to bear any strain or shock. Surgical operations at this period are generally followed by rapid gangrene and fatal results.

The sugar found in the urine in this disease comes from the starchy foods eaten. The blood of the portal veins contains, in health, a considerable quantity of glucose, which in the normal subject is broken up into blood and carbonic acid. This is the natural healthy process which is stopped in saccharine diabetes. The starch is changed in digestion into glucose, and reaches the portal vein in that state, but never goes beyond that stage, and therefore goes into the general circulation as glucose. The liver plays a very important part in diabetes. Not only does the starchy food taken never pass beyond the stage of glucose, but it is also probable that the so-called glycogenic, or animal glycogen-producing function of the liver is unusually, abnormally, active in diabetes.

A certain set of organic diseases of the brain are attended with diabetic symptoms. These diseases all affect the floor of the fourth ventricle, near the origin of the pneumogastric nerve. Experimental lesions of the floor of this ventricle are known to cause sugar to appear in the urine.

Diabetes occurs in all ages in both sexes. All classes of persons are liable to it. There is often seen a set of *diabetics* past middle life, who manage, in spite of their disease, to keep up flesh end strenth. There is not much sugar in the urine, and the case is generally of easy management. In youth, diabetes is always attended with more or less danger.

In the hygienic treatment of this disease, the first effort must be toward the cutting off the supply of all starchy elements of food. If the urine becomes less abundant under this exclusive regimen, some hope of the ultimate cure may be held out. In some very obstinate cases, even after excluding from the food starchy matters, the urine still continues to contain a large proportion of sugar.

In all cases the diet must be modified, as above stated. Much time might profitably be spent in the consideration of the diatetics of this disease, and I shall have to postpone this until a future occasion. As regards the medicinal methods, I have derived the best of results from the continuous administration of large doses of opium; as much as ten grains may be given daily, in divided doses, without producing the slightest drowsiness. This treatment has been followed in the present case by a great decrease in the amount of urine and of sugar contained. The proportion of sugar, however, has not yet gone down. The boy is taking now five grains of opium daily, and the amount of urine has fallen from twenty to eleven pints daily. As regards the prognosis of this consuming and weakening complaint, nothing favorable can be offered, until the sugar begins to disappear from the urine.—*Phila. Med. and Surg. Reporter.*

A CONTRIBUTION TO OUR KNOWLEDGE OF PHYTOLACCA DECANDRA, AND OF GRINDELIA ROCUSTA.—1. *Phytolacca*—Everybody is familiar with the appearance of the despised poke, but few are aware of its really valuable properties. No systematic study has hitherto been made of its physiological actions. The accidental administration of poke-berries, in sufficient quantity to cause serious symptoms, has furnished information of great value. I have studied these cases, to compare the symptoms produced in animals, with those which have occurred in man.

It has long been known that poke is a nauseant and emetic, and that vertigo, convulsions and coma have been observed in cases of poisoning by this substance. Referring to these symptoms, the United States Dispensatory remarks that it must possess "unsuspected powers" as a "spinal irritant." The accounts which have been published of cases of accidental poisoning, show that poke affects the functions of both brain and spinal cord.

My experiments were made on frogs and rabbits. The most characteristic reactions are produced in these animals; and as these reactions correspond to the symptoms observed in man, we may accept the results without hesitation.

Phytolacca is a most depressing and nauseating emetic, and has been proposed as a substitute for ipecacuanha; but the suggestion has never been acted on, because the action is so intensely disagreable. Both in frogs and rabbits the nauseant effect is very obvious. When the frog is nauseated by it, the under-jaw drops, and he presents the most ludicrous appearance of intense disgust. Phytolacca is a specific emetic—that is, whether taken into the stomach or thrown under the skin, it causes nausea and vomiting. The gastro-intestinal secretions are increased by phytolacca. Diffusion into the blood takes place with facility; but in what form, and what changes, if any, are induced by it in the composition of the blood, are quite unknown. It slows the cardiac movements and lowers the arterial tension. The action of the heart continues after the entire cessation of the respiratory movements. This can be easily seen as follows: Paralyze a frog with it until all external signs of life have ceased, when, on opening the chest, the heart is still seen in action. But it is a heart poison as well as a respiratory poison, although it affects the respiration more than the heart. Phytolacca affects warm-blooded animals similarly. When paralytic symptoms are produced in a rabbit, pass into the heart, through the chest-wall a long, strong needle having a rod of pine-wood attached. Every movement of the heart is then represented to the eye by the movement of the rod. It is obvious that any subsequent changes in the cardiac movements will rupture the synchronism between the rod and the metronome. I have made a number of observations on the action of the frog's heart, with the metronome, of which the following experiment is an example:

Injected a large frog, intended for the table, with ʒj of the fluid extract. The first effect was sluggishness in all the voluntary movements, with increasing paresis. When a fore extremity was doubled up under the chest, he made no attept to remove it. The paresis increased, so that he could not jump, and the hind extremities were partly extended. The lower jaw dropped, and the mouth remained widely open. When now, an extremity was sharply pinched, he manifested no sign of pain. In an hour there was complete muscular relaxation, and all external signs of life had ceased. On opening the chest, by dividing the sternum, the heart was found to be in action feebly, beating eighteen per minute. Adjusting the metronome to strike at the same rate, the action of the heart was ascertained to be slowing and its pulsations feebler.

At the end of two hours the effect of the dose had declined considerably; the frog made violent efforts to turn over, and at last succeeded. The action of the heart then rose to 30. When he had turned over and assumed the usual sitting posture, he looked quite natural notwithstanding the opening in the chest.

The experiment just narrated apparently demonstrated that phytolacca is a paralyzer of motility and sensibility. Exact observation on the sciatic nerve, the limb being isolated and separated entirely from the body, except by the nerve, showed that the sensibility of the sensory and motor nerves to their appropriate stimuli, was unaffected.

The paralysis of motion and of sensation is therefore due to an impression made by phytolacca on the spinal cord.

In a young rabbit weighing forty-six ounces, a drachm of fluid extract of phytolacca administered subcutaneously, caused at first excitement followed by stupor, weakness of the extremities, trembling of all the voluntary muscles, and especially trembling of the ears; increasing paralysis, both motor and sensory, contracted pupils, convulsions, death ensuing from failure of respiration. A number of trials on rabbits produced essentially the same results. I need not, therefore, occupy time in detailing them.

The therapeutical applications of phytolacca are, as yet, strictly empirical. A good deal of clinical experience has been accumulated—most of it to be found in the United States Dispensatory—showing that poke possesses properties to which the old and meaningless term, *alterative*, has been applied. The berries, usually steeped in whisky, have been employed with success in the treatment of *chronic rheumatism*. Whether berries or whiskey has been most influential in bringing about a cure, has not yet been determined. So many instances of good effects following its use in chronic rheumatism have now been reported, that it must be regarded as having some special power over this affection. Cases of *constitutional syphilis* have, it is said, been arrested by the use of phytolacca. (Resources of Southern Fields and Forests, p. 402.) Locally applied in the form of decoction, *parasitic skin diseases*, unhealthy *wounds*, *ulcers*, and even *cancer*, have been reported cured.

While many of these alleged cures are no doubt apocryphal, there must be some fact as a basis for pretensions so positive. As respects the supposed alterative powers of poke, they may be regarded as similar to those of guaiac. Indeed, all remedies which increase the secretions of the intestinal canal, kidneys and skin promote elimination of all foreign and excrementitious materials which seek an outlet through these channels. The good results which have followed the application of a decoction of poke to unhealthy wounds, may well be admitted as genuine, for decoctions of other astringents are used with advantage in such cases.

Thus far, it must be admitted that the empirical knowledge of the uses of phytolacca is not extensive, and doubtless far from accurate. There is, however, another application of this agent, which, if sustained by future experience, must be regarded as extremely important. I refer to its use in *mastitis*, inflammation of the mamma. Dr. Tidd, not long since, published, in *The Clinic*, a paper showing the utility of phytolacca in this disease—showing, indeed, that it has the remarkable power to prevent suppuration. Others have published similar experiences, and I am favored with a verbal communication from my colleague, Prof. Palmer, in which he expressed a strong conviction that phytolacca really does possess this remarkable property. If it shall be settled that mastitis may be arrested, and suppuration prevented, by the use of this remedy, it is plain that we have in poke a drug of very unusual power. I do not conceal from myself the great difficulty of discriminating between the *post hoc* and the *propter hoc* in such a malady as an inflamed breast proceeding to suppuration. Numerous observations must be made, and under conditions that admit of no misconception, before this question can be settled.

2. *Grindelia.*—This remedy comes to us from California. Its botanical name is grindelia robusta, and the leaves, stems and flowers are the parts employed in preparing pharmaceutical products. The most eligible preparation is the fluid extract.

Grindelia has not, as yet, been subjected to thorough chemical investigation. Partial examination has shown that it contains an alkaloid, having basic properties. The oleo-resin is probably an important constituent also.

As considerable demand has sprung up, already some sophistication has been practiced, other members of the family having been used for this purpose.

My experiments were made on frogs and rabbits, chiefly, and I supplemented these by some observations on myself to a limited extent. Besides these sources of information, I have consulted all the papers which have been written in regard to its effects on certain diseases, and have prescribed it in maladies, for the relief of which it is so highly commended by our Californian colleagues.

Grindelia is by no means actively toxic, since a half-ounce of the fluid extract was required to kill a small rabbit. The taste is bitter, rather acrid, and is decidedly persistent. In the stomach, in any considerable quantity, it gives rise to a sensation of warmth, which diffuses throughout the system. The action of the heart becomes more energetic, the tone of the vascular system rises, and increased secretion, salivary and cutaneous, takes place. The increased blood pressure is not long maintained, but descends a little; the respiratory movements, at first hastened a little, become slower and fuller.

The most important action of grindelia, unquestionably, is its influence on the cerebrum. The first impression is to increase the activity of the cerebrum, but this stage of excitation is soon succeeded by a condition of mental calm, lapsing into sleep, but not into coma. During this stage of sopor the pupils are somewhat dilated, the respirations become slow, but are deeper, and the rythm continues normal. In rabbits the condition of sopor is accompanied by a marked degree of muscular paresis, beginning in the hind extremities. The contractility of the muscles and the irritability of the nerves, both motor and sensory, remain unimpaired, so that the paralytic symptoms are due to the action of the agent on the brain or spinal cord, or both.

Notwithstanding grindelia produces distinct paralytic effects, it exalts the reflex functions of the spinal cord in a remarkable manner. When a frog lies with all the limbs extended, and deprived of all power of voluntary movements, a gentle tap on any part of the body is followed by rapid, tetanic contractions of all the voluntary muscles, beginning in the upper extremities, next extending to the spinal muscles, and reaching in a second of time the muscles of the leg. These tetanic spasms, produced by a peripheric irritation, seem to me to be of the same character as those which occur in frogs after some hours of complete muscular resolution, caused by lethal doses of atropia.

Death ensues by paralysis of the muscles of respiration, and cavities of the heart (frogs) are distended with blood. The elimination of grindelia takes place through the kidneys chiefly. The oleo-resin is more or less irritating to these organs; more frequent irritation results, and the amount of urine discharged is increased above the normal. As respects the action of grindelia on the kidneys, it is comparable to that produced by buchu, uva ursi, eucalyptus, and other agents whose activity is due to the presence of an oleo-resin. A peculiar odor is imparted to the urine by the oleo-resin of grindelia.

The therapeutical applications of grindelia might be deduced from a study of its physiological actions. The combination of an oleo-resin with a narcotic principle, is one especially advantageous in the treatment of the respiratory neuroses. The same result has been reached empirically. Our Californian colleagues have used grindelia with success in the treatment of the asthmatic paroxysm. If I may form an opinion from an experience with a few cases, I must admit that the California reports are well founded. In several cases of asthma, in cough maintained by habit, and in spasmodic cough from reflex causes, it has afforded decided relief. Like other so-called expectorants and diuretics, which contain an oleo-resin, grindelia is serviceable in chronic bronchitis, and bronchorrhœa, and in catarrhal states of the genito-urinary mucous membrane.

The effects which grindelia produces on the cerebrum, as a hypnotic and anodyne, are strongly suggestive of a sphere of usefulness in the future. How far the anodyne and hypnotic action, so conspicuous in animals, will occur in man, remains to be seen.—*Journal of Nervous and Mental Disease.*

RECENT PROGRESS IN OTOLOGY.—*The Nasal Douche and the Ear.*—Inflammations of the middle ear, both catarrhal and purulent, have been frequently reported in the last few years as the direct result of the use of the nasal douche, and many unreported cases have occurred in the practice of those who have seen much of aural disease since the extensive use—and abuse—of Weber's apparatus. The reckless employment of the instrument without advice, and with almost every imaginable fluid, and for any and every condition af the naso-pharyngeal cavity, including even fancied collections of dust, was, undoubtedly, the cause of some of the earlier accidents to the ear; but further experience has shown that even with all the cautions which the physican can give it will occasionally happen that any fluid introduced into the naso-pharyngeal cavity with force, be it by the douche, or the nasal or pharyngeal syringe, may find its way into the eustachian tube, and set up an inflammation of the middle ear. To diminish the risk of this accident, as far as possible, the following cautions are now generally recognized as necessary to be observed with the use of either the douche or syringe: The water should be lukewarm, and contain a small quantity of salt, to make its specific gravity as nearly equal to that of the blood as possible; any great pressure should be avoided; the act of swallowing, or any other movement of the pharyngeal muscles which tends to open the eustachian tube, should be carefully prevented by the patient; blowing of the nose and sneezing, for some little time after the operation, should also be avoided. In spite of these cautions occasional accidents to the ear still occur, even when the physician himself has superintended the application of the fluid; and Buck has recently reported cases of inflammation of the middle ear from the simple snuffing up of salt water into the nose, no syringe being used. The argument that has been used, namely, that the ear disease, after the use of the fluid, is a mere coincidence, and not the result of the operation, is sufficiently refuted by the clinical histories of many of the cases; for the passage of the liquid toward the ear is distinctly felt by the patient at the time, and is followed immediately by the pain, which continues through the course of the disease.

These being the facts, as learned by experience, some writers have urged that the use of fluids in any quantity in the naso-pharynx should be entirely discarded, and that the objects of cleansing the cavity and of making applications to it should be done by sponge or brush. Others, recognizing the great value of douching for certain diseases, especially ozæna, are endeavoring to add to the cautions already observed, such others as shall wholly prevent the possibility of the fluid reach- the ear. Zaufal considers the use of the douche as absolutely necessary in ozæna and certain ear disease dependent on disease of the nasal mucous membrane, and would prevent the entrance of fluid into the eustachian tubes, by a mechanical closure of those tubes. He has seen demonstrated, that pressure of the soft palate towards the orifices of the tubes, has the effect of raising the floor of the eustachian tube so high that the tubal cartilage is pressed back, and the floor of the tube is pressed against the cartilage-hook, and the orifice is tightly closed. Accordingly, when he wishes to apply the douche, he stands behind the patient, and with two fingers closes the tubes by a firm pressure of the soft palate against them.

Frankel, while acknowledging the effectiveness of this expedient of Zaufal's, considers that it is not always, or even generally, applicable, but thinks that the same closure of the tubes can be produced by the phonation of the non-nasal vowels. His practice is as follows: before using any applications he satisfies himself that both nostrils are free enough to allow the exit of fluid, and this is readily accomplished by closing first one nostril and then the other, while he is listening to the breathing of the patient. Instead of a Weber's douche, he uses the rubber bulb syringe of Michel (the Davidson syringe would be a good substitute), which enables the patient to check the current when necessary. The patient is then directed, before compressing the bulb—that is, beginning the douche—to pronounce the vowel o, and to continue this phonation till after the douching is over, thus closing the palate against the posterior wall of the pharynx and the eustachian tubes, by contraction of the levator palati muscle. The advantage of this use of phonation over the former method of douching is, that the naso-pharyngeal isthmus is already closed before the fluid enters the nose, instead of closing by reflex irritation after the entrance of the fluid.

In addition to the cautions already given, these expedients of Zaufal and Frankel can well be borne in mind in prescribing any form of the douche—the former when the surgeon himself makes the application, the latter when it is intrusted to an intelligent patient. But, unfortunately, the intelligence of patients, in a surgical sense, cannot be depended upon, and the question of whether the benefit from the douche more than counterbalances the slight risk to the ear, must be left to the decision of the prescribing physician. Certainly, the cases of ear disease which have been reported, should lead to a careful consideration of each individual nose, and should check the reckless and indiscriminate use of the douche.

Rupture of the Membrana Tympani by Hanging.—Zaufal explains the well-known fact that the membrana tympani is often found ruptured in persons who have died by hanging, as follows: from the compression of the neck the tongue is forced upwards against the soft palate, and this, in turn, presses the floor of the eustachian against its roof, closing the tube. This closure taking place very rapidly, the air within the tympanum is condensed, and ruptures through the membrane.

Syphilitic Disease of the Labyrinth.—Comparatively few and imperfect observations of the histiological changes of the labyrinth in syphilis have been published, and the following by Moos is of special interest: A man, aged forty-four, after seven years of constitutional syphilis, complained, with other symptoms of tertiary disease, of "frightful" subjective noises of all varieties in the ears, and occasional attacks of dizziness. The hearing was perfect, and inspection showed nothing. Three months after, the perspection of higher tones and the ticking of a watch was diminished, but conversation was well heard. In six weeks more the perception of the voice was seriously affected, and within a week the deafness was very extreme. Death from bronchitis followed eight days after. Dissection of one ear showed sclerosis of the petros bone; the external and middle ear were normal throughout, and the only changes were in the labyrinth. The periosteum of the vestibule was thickened, and the base of the stapes immovable; the connective tissue of the vestibule hyperplastic, and with small-cell infiltration; the periosteum of the lamina spiralis ossea and the different zones of the lamina spiralis membranacea, more especially the pillars and arches of corti, likewise inflated; the acoustic nerve was normal.

These microscopic appearances correspond, Moos says, with Virchow's and Wagner's descriptions of the earlier stages of syphilitic new growths, and he considers that the pathological process in the ear started from the periosteal connective tissue of the vestibule, and extended by contiguity to the cochlea, of which the zones were somewhat unequally affected. The primary disease of the vestibule, he thinks, was most probably caused by the extension of a syphilitic inflammation of the connective substance of the bones and the periosteum of the skull to the labarynth, the first appearance of the ear symptoms being simultaneous with the characteristic syphilitic headache. The earlier ear symptoms, subjective noises, and vertigo, were caused by the periosteal irritation in the vestibule; the later, rapidly-increasing deafness, etc., by the anchilosis of the stapes and the infiltration of the cochlea, this latter especially being sufficient, by its pressure, to obliterate the functions of the nervous structures.

The earlier pathological changes, that is, the small-cell infiltration, Moos thinks would lead one to expect in some cases a cure from appropriate medication, provided always that atrophy, caseous degeneration or ulceration, had not set in. The latter changes, however, the hyperplastic, would be beyond hope.

From the symptoms in this case and from his previous experience, Moos agrees with Hinton that an early and very rapid loss of hearing is an important symptom for the diagnosis of syphilitic ear disease. An early diminution of the perception through the bones he has also observed. Extreme deafness from syphilis he has never been able to affect by any therapeutic means, but the true "nervous" syphilitic cases in the very earliest stages he has found amenable to treatment.

Extension of Inflammation from the Brain to the Tympanum.—Inflammation of the brain, showing itself as meningitis, encephalitis, or thrombosis from an extension of an inflammatory process in the ear, is by no means uncommon, and the avenues by which such an extension takes place have been carefully studied and are quite well understood. The reversed process, however, an extension of inflammation from the brain through any of these avenues to the ear, is very rare, almost the only instances confirmed by post-mortem being cases of cerebro-spinal meningitis, in which the membranous labyrinth, or the tympanum, or both, were found in various stages of inflammation. Berndgen reports a case of interest, both as an instance of secondary inflammation of the tympanum dependent on brain disease and of an unusual avenue of communication between these two organs. A strong man, aged twenty-one, complained of severe pain in the left ear, and presented all the appearances of an inflammation of the tympanum, serous infiltration, and marked redness of the membrana tympani, etc. Under the use of leeches and the air-douche this rapidly improved, and he resumed work, but returned after a few days on account of an attack of severe dizziness, which it was feared depended on extension of the inflammation to the brain. The inflammation of the ear had much diminished. The dizziness soon passed off, but eight days after he had severe temporal headache, which was followed in four days by sopor, clonic spasms, and death, with the symptoms of paralysis of the brain. The autopsy showed an abscess, the size of a pigeon's egg, in the substance of the left cerebellum, which had ruptured through the dura mater, and a little pus was lying external to this membrane. The dura mater itself on the left side was hyperæmic and thickened, and this was more particularly the case in the immediate neighborhood of the fissura petrosquamosa, which in this case had never closed, but remained in the state in which it is generally found in children when it forms a direct communication between the cavity of the skull and that of the tympanum. The mucous membrane of the tympanum showed only slight redness, swelling, and a little catarrhal secretion. The roof of the tympanum and the dura mater covering it were intact. The mitral valves of the heart showed marked thickening. Other organs normal.

The condition of the abscess, its size, and the thickening of the dura mater, together with the slight disease of the tympanum, leave no doubt that the brain disease was primary and the tympanic disease secondary, or more correctly, that the encephalitis occurred first, this extended to the dura mater, and then through the abnormally open fissura petrosquamosa to the tympanum. This communication between the encephalon and tympanum, which must be referred to an arrest of development, adds another to the numerous channels for the extension of inflammation from one organ to the other.

The case of Berndgen is another instance of the insidious ourse of abscess of the brain.—*Boston Medical and Surgical Journal.*

ON THE ETIOLOGY, PATHOLOGY AND TREATMENT OF SPERMATORRHŒA AND IMPOTENCE.—The subject to which I desire to call your attention this afternoon is one which receives little or no attention in the regular course of lectures, or in the majority of your text-books. Though a subject of such importance to medical men, as well as to humanity in general, it is more fully discussed by quacks than educated physicians. This city, and every other large city, has a prolific growth of these people, and they find hosts of victims, whom they return to us as worse than ruined by their pernicious advice, and their still more pernicious treatment. There is so much surface modesty nowadays that it is hardly considered proper to make a study of the functions of generation, or a study of the pathological conditions, or the habits which transmit disease to generations yet to come. The principal remedy for this is for medical men to become as familiar with the pathology and treatment of the varied forms of spermatorrhœa and impotence, and the long series of constitutional troubles which accompany them, as they are with the treatment of a diseased lung or a broken leg, and to disseminate such knowledge of the consequences of these diseases, the result of uneducated and uncontrolled desire, among their patients and friends capable of appreciating their motives and their advice.

But before entering upon a study of the morbid conditions referred to, let me briefly refer to the normal physiological condition of the organs involved, so that you may more readily understand the pathological condition.

The seminal fluid secreted by the testicles passes through the vas deferens to the vesiculæ seminales at the base of the bladder, where it is stored up for future use. From these sacs it passes out through the ejaculatory ducts into the urethra, becoming mixed, as it passes through the latter, with the secretions of the prostate and Cowper glands. I am aware that some think the office of the vesiculæ seminales is *not* to retain a reserve quantity of spermatic fluid; but a storehouse *is* necessary for its reception, and as there is no other sac anywhere near which would answer the purpose, I conclude that their office is just as I stated. There is no proof whatever that the surplus stock of seminal fluid is absorbed to enrich the blood. The statement is guess-work. In the normal condition the secretion is constant, and as soon as the vesiculæ seminales become filled, some of it must be thrown out by nocturnal emissions, to make room for the newly manufactured fluid coming from the testicles. Where sexual intercourse is not indulged in, emissions may occur as often as once a week, though a majority of healthy men do not have them more than once in two or three weeks. In the healthy state emissions never occur during waking hours—only at night; and the erections and pleasurable sensations are of the same character as accompany sexual intercourse. The sensation which accompanies the orgasm is produced by congestion and distention of the veru montanum in the prostate portion of the urethra.

Emissions are not confined to the male—they are of common occurrence in the female; the secretion which is poured out at the time of the orgasm comes from the glands of Bartholini, situated on each side of the commencement of the vagina, external to its walls. These emissions occur at night, in connection with lascivious dreams, in precisely the same manner that they arise in the male.

The erection of the penis, which precedes the emission of seminal fluid, is due primarily to a distention of the erectile tissue of the organ with blood. If you examine this erectile tissue you will see that it resembles somewhat the structure of an ordinary sponge; that it consists of innumerable spaces, irregular in form and size, with elastic walls capable of great distention. In these cavities are found thin-walled blood vessels, also capable of an immense increase in size. These vesicular channels, as in other parts of the body, are under the control of the sympathetic nervous system, and through the sympathetic nervous system their calibre is regulated. Emotions of various kinds, which I need not enumerate here, cause the vessels of the erectile tissue to dilate, a large quantity of blood is forced into them, until the whole organ is distended to twice its ordinary size. The distension of the blood vessels is similar to that which occurs in blushing; a thought will cause the capillaries of the face to dilate, and the skin to become red; an emotion of a contrary kind will produce sudden contraction of the capillaries, and consequent pallor. Both occurrences are completely beyond the control of the will. So it is with erections. The will has little or nothing to do with them; one variety of emotion will excite them, and another destroy them, and this is an important fact for you to remember in the treatment of impotence.

The permanency of the erection depends: 1st, on an increased afflux of blood to the part; and 2d, a certain amount of obstruction to the return circulation from the organ, produced by contraction of the muscular fibres of the accelerator urine and erector penis. Many physiologists deny that there is any obstruction to the return circulation; that the erection is maintained simply by the increased quantity of blood sent to the organ. Well, I don't agree with them. It is a fact that the muscles mentioned are contracted during erections. From their situation and attachments it is impossible for them to contract without obstructing more or less the blood *coming from* the penis. Besides this there is a physiological reason for the stoppage of the current outwards. The penis, as you are aware, sometimes gets into a tight place, and if there were no impediment to the return circulation, the blood would be forced out during intromission, and a consequent failure of the erection would result. I don't mean to say that the obstruction is complete by any means, but there is enough to make the organ rigid, no matter how much compression by natural means is brought to bear on it.

We know very little about the elements which govern the erectile power. Gall, who developed phrenology, located it in the cerebellum. When this portion of the brain is removed from the cock before placing him among his family of hens, he attempts to perform his duties as of old, but is unable to steady himself for the act, and finally goes off disgusted. Here you see there is still *desire*, but the bird is rendered incapable because he cannot co-ordinate his movements. Removal of the cerebellum has caused atrophy of the genitals, and irritation of the organ from disease has been followed by satyriasis in the male, and nymphomania in the female. There can be little question, therefore, that the cerebellum has more or less influence over the function of generation; what its special work is remains yet to be determined.

There is a nerve-center in the cord opposite the lumbar vertebræ called the genito-spinal center, from which nerves can be traced which supply the genital organs. An irritation applied at this point will produce erections of the penis and contraction of the bladder, and in the female contraction of the uterus.

Masturbation.—Now, as to the causes of spermatorrhœa or impotence. They are very numerous, but masturbation takes the first place in the majority of cases. Masturbation is an universal vice in civilized countries among both sexes. Savage races are free from it. They are under no obligation, moral or otherwise, to abstain from the natural gratification of their passions—are not compelled by social laws to govern their sexual appetites. There is no reason, therefore, why they should resort to irregular means of relief.

Masturbation has been noticed among lower animals, as dogs, rats, etc., but I am inclined to think it exceedingly rare, and that the animal so indulging must have been taught the act by some depraved animal of our own species.

Children begin the habit at a very early age. Instances are on record of babes at the breast doing it; but I should want ocular proof of them before believing. It is no uncommon thing, however, for children to commence masturbation at the age of five years. From that period to the age of sixteen might be called the masturbation age, though the vice may be indulged in at much later periods of life.

There are certain gymnastic exercises which are provocative of masturbation, and which should be prohibited until manhood is reached. These exercises, too, are common in all our school gymnasiums, as well as public gymnasiums. My attention was first directed to this important fact a few years ago by the history which a confirmed masturbator gave me of his first experience. When a lad of eight he commenced exercising in a school gymnasium. One day, while using the swinging pole, sustaining the whole weight of his body by his hands, he felt a peculiar sensation in his genital organs, which became so intense that he was compelled to sit down. Every time he resumed the exercise the same pleasurable sensations returned. They led him to a closer examination of his genital organs, and subsequently to new methods of increasing the excitement, until he became a confirmed masturbator. Since then I have had a somewhat similar history from five other persons, one a female, confirming the opinion which I now hold, viz: that all exercises, such as climbing and sliding down poles, swinging from rings or ropes—the body being supported by the hands alone—should be dispensed with until the age of twenty or thereabouts; then there is less danger of determination of blood to the genitals as a consequence of these exercises.

When the vice of masturbation is fully developed it is rarely, if ever, discontinued before the age of twenty, and it is often continued to a later period. About that time the effects of the sin manifest themselves so plainly that the fears are aroused, and an attempt at reformation made—an attempt which generally succeeds in men not entirely given over to the dominion of ungovernable and beastly sensuality. A few years of masturbation leave characteristic local marks on the genitals, even though the rest of the body give the appearance of health, which is rarely the case. The local lesions are sufficient for a diagnosis, even when there is no history of the case obtainable. The penis is much thinner than normal elongated sometimes, with a glans much larger than the body of the organ. This is due to the gravitation of the blood, which fills and distends the easily dilated vessels of the glans in the pendant position. The veins of the integumental covering are dilated and varicose. The penis is often bent laterally, generally to the left side, a condition due to partial paralysis of the opposite side. I have, in such cases, found the opposite or convex side to be deficient in sensibility. A like condition may be present in persons who have indulged too much in venereal excesses. The testicles are smaller and softer than natural, and hang low down on the relaxed scrotum.

The mucous membrane of the urethra is congested throughout; but the most marked changes are noticed in the prostatic portion of the urethra. In this condition the mucous membrane was very much thickened and congested. The veru montanum is increased to twice its ordinary size, being often so large as to afford an obstacle to the passage of the sound. The whole mucous surface of the prostate presents very much the same appearance as granular lids do in long standing cases, with the difference that the color is much darker. If you examine the orifices of the prostatic ducts which lie on each side of the veru montanum, you will find that they are much larger than normal, darker colored than the rest of the mucous membrane, divested of epithelium, like the other parts, and containing considerable muco-purulent exudation. Occasionally ulceration exists at the orifices of these ducts. The mouths of the ejaculatory ducts, which open near the edge of the *sinus pecularis*, in front of the veru montanum, present similar changes. The prostate gland is enlarged, and is often tender on pressure. Pressure on the gland through the rectum will generally be followed in a few moments by the appearance of an opaque fluid at the meatus, which is partly prostatic secretion and mucus, containing epithelial cells. You will also find that these patients have a frequent desire to micturate, and micturition is rarely accomplished without some sense of discomfort at the neck of the bladder, or rather at the prostatic portion of the urethra, where it is irritated by the salts of the urine passing over it. The passage of a sound is followed, in many instances, by a discharge of a clear viscid mucus. This viscid mucus also occurs in large quantities after excessive venereal excitement.

If the patient has been frightened out of his bad habits, or has ceased them from any cause, he will, in a short time thereafter, be troubled with emissions of seminal fluid at night, accompanied by dreams, sometimes with erections, but oftener without them. These emissions vary in number from two to four and five per week, and they may occur during the daytime from slight sexual excitement. Such a condition is known as spermatorrhœa, though the term, in its strictest application, means a flow of seminal fluid, without erections, desire or pleasurable sensations—an extremely rare condition. When the emissions appear the patient's fears are increased. He believes that he is ruined beyond hope of recovery. If he attempt sexual intercourse, he is sure to fail; and that is about the only good thing which results from the habit of masturbation, for during these years of inordinate sexual excitement he will often have endeavored to cohabit with girls of his acquaintance, whose ruin would be accomplished were it not for the weakness and nervousness which make him impotent. The majority of masturbators are for a time impotent, and consequently harmless.

In connecion with emissions of seminal fluid in patients who have masturbated or indulged greatly in sexual intercourse, there is often a discharge of opaque mucus which occurs independently of venereal excitement, and which is considered by the patient to consist of seminal fluid. If you examine it under the microscope, you will find it made up of pus and epithelial cells; there are no spermatozoa in it. Never call this condition spermatorrhœa.

It is generally supposed that every masturbator carries his sign out, and that the face is a never-failing "tell-tale." Such, gentlemen, is not the case. The majority of masturbators don't show any more than married men do the results of free sexual intercourse. It is only when the vice has been indulged in to excess for a long period of years, when it has destroyed all the finer instincts of manhood, that you notice the pale expressionless face, with sunken eyes that seldom meet yours, but steal sidelong glances when your attention is drawn another way. You will find in such instances also a cold, clammy skin, the superficial veins of the integument dilated, the tongue coated, breath bad, and bowels always constipated. You will find them cowardly, easily startled, sleepless, inanimate, forgetful, stupid, often troubled with epilepsy, and occasionally with the mind on the verge of insanity—mere animals in everything, in desire and in acts.

Mental Emotion as a Cause of Impotence.—The vast influence of the mind over the organic functions cannot be over-estimated. As medical men we see it everywhere in the course of our daily practice. We know from what we have seen that a "strong imagination will create what it imagines" with very little trouble. We see it among the manifestation of hysteria in a very marked degree. I remember, when an interne at Bellevue, an hysterical woman who was placed near a patient suffering from mammitis. The morning after her admission she complained of a pain in her breast, and on examining it I found it swollen and much larger than the one on the corresponding side; yet there was no fever nor any other sign of inflammation. I have seen another in the same way get an attack of pseudo-peritonitis, and still another develop all the symptoms of a real inflammatory softening of the brain, all copied from other patients who were really afflicted with the diseases in question.

Now, there are no organs in the body so readily influenced by mental emotions as the genital organs, and mental emotion is one of the commonest causes of impotence in existence. Impotence of this nature may occur in married or single men in comparative health, as well as in those who have masturbated to excess. In the latter it is more apt to take place, but you will find very many cases where there is no other assignable cause but mental emotion. Troubles in business, anxiety about the health, family jars, a fit of indigestion, a disagreeable remark from one of the interested parties, a leucorrhœal discharge with a fetid odor—in fact, any uncomfortable feeling whatever which takes the mind away from the act, will bring on impotence; and, when one failure occurs, no matter how trivial the cause, others are sure to follow. Fear is an essential element in many cases—fear that the act cannot be accomplished; it is this fear which produces impotence in many who have masturbated. They read in advertisements and elsewhere of their loss of manhood, and the very first attempt at intercourse fails, even when there is really no loss of power. Temporary impotence has been produced in a healthy man by a friend's recital of his own surprising failure. The thought of the accident which befel the friend occurred at the wrong time and he too failed. I had a patient last year troubled with gleet; if he noticed the discharge before retiring it affected his mind so much as to render him incapable. Another that I know is only impotent with his own wife; with strange women he has no trouble whatever. Here, of course, there must have been an absence of that magnetism which should exist between man and wife, and perhaps an uncontrollable aversion added to it, both working together to induce the failure. Roland speaks of a man who just had connection for the first time with a woman fully dressed, and who continued the intercourse under similar circumstances for some months. Subsequently he married, but found, much to his astonishment, that he was unable to begin or even to complete the act. The previous intercourse with a woman in full dress had disturbed his equilibrium, and he could only perform his part with the first surroundings. I believe that he was fully able to conquer this feeling completely. I might go on with innumerable instances of such cases of impotence, but our time will not admit of it; neither do I think it necessary. But I do wish you to be impressed with the idea that emotions cause impotence in most patients, and that such impotence is always amenable to treatment, and can, with rare exceptions, be recovered from.

Malformation of the Genitals.—A week ago I saw a patient in Charity Hospital who had a large cicatrix near the corona glandis, involving the integument. When erection took place the glans became bent on the body almost at right angles. He suffered considerable pain at such times, and was unable to effect intromission. An appropriate incision cured him. Bending of the organ on itself from the contraction of cicatricial tissue is not uncommon, and it can generally be relieved by the knife.

Tumors of the penis also cause impotence, the enlargement preventing intromission.

Cases of double penis involve impotence, unless vaginæ can be found to match them.—*Medical Record.*

SKIMMED MILK AN IMPORTANT ADJUNCT IN THE TREATMENT OF CATARRH OF THE BLADDER AND CYSTITIS.—Gonnorrhœa is the legitimate parent of catarrh of the bladder, as well as the cause of cystitis. Though the terms are not synonymous, yet they are identical, being indicative of different stages of the same disease, inflammation of the bladder. I have had many cases of catarrh, consequent upon protracted gonnorrhœal attacks, causing stricture, and thereby inducing catarrh. The symptoms of either catarrh of the bladder or cystitis are more violent and distressing than an organic stricture, and equally as painful as an urinary calculus. The strangury is intense, and as long as the ureters convey urine into the bladder, so long does the scalding pain continue. Micturition affords only temporary relief, and really intensifies the desire to urinate, for if a large amount of urine could be retained in the bladder, the ammoniacal decomposition would virtually dilute the influx, and the bladder thus acquire a tolerance of the contained urine, mingled with the mucoid secretion. The metallic sound can only decide satisfactorily as to the presence or not of urinary calculus, because the chain of subjective symptoms is so simple in cystitis, stricture and stone, that to be perfectly safe in your diagnosis the sound had better be used to differentiate. Stone, however, is more to be apprehended in limestone countries than in the southern portion of the United States.

In my practice, excluding the presence of an urinary calculus as a primitive source of catarrh or cystitis, I must accredit to gonorrhœa the causation of catarrh, cystitis and stricture, primarily in some cases and secondarily in others. I have had patients consult me for stricture when the largest bougie could be passed; yet upon a close catechism and examination of the urine, I have found them suffering with the most excruciating agony from catarrh of the bladder and not from stricture of the urethra. In fact, they had been treated for stricture up to the date of application to me for relief. I have thrown aside instruments and put them upon skimmed milk, with the following prescription:

℞.—Quiniæ hypophosphitis, ...	ʒ ss
Ferri pyrophosphatis, ...	ʒ ss
Pulv. ergotini (or Bonjean's), . .	gr. xv
Ext. nucis vomicæ, ...	gr. vii

M. ft. pil. No. xv. Sig. one to be taken every four hours,

The above, in addition to skimmed milk, has invariably been successful in a comparatively brief period of time. Skimmed milk has been used frequently enough to decide its peculiar specific virtues, independently of other internal treatment, which treatment of course is clearly indicated. In these cases I have abandoned the vaunted astringent injections into the bladder, for the more pleasant and readily administered medicine skimmed milk, and can cheerfully confirm all that has been written of its influence in albuminuria as applicable to cases of catarrh of the bladder and cystitis, the latter when not of too long standing.—*American Practitioner.*

Bimanual or Combined Turning.—When at this time I undertake a chapter on operative midwifery, the subject of which has in former and oft-repeated discussions led to apparently satifactory conclusions, it is the observation that certain gained and generally accepted advances, made within the past twenty years, find altogether too limited application in practice.

So far as I have been enabled to observe, it is yet the custom of the majority of obstetricians, as soon as the external manipulations have not led to a satisfactory presentation of the fœtus, to introduce at once the whole hand into the uterus, there to grasp either the feet or the head in order to turn the child. Certainly a large number of cases could be related, the entirely satisfactory result of which, would encourage a repetition of the foregoing procedure under similar circumstances. Yet we must not lose sight of the dangers which are undoubtedly connected in a far greater degree with this operative procedure, than are connected with the manipulations made upon the abdomen, or with their assistance, with a partially introduced hand into the uterus.

Regarding the advantages connected with such a relatively inferior procedure, probably all agree. Furthermore, I fully agree with the principal text-books, so far as they teach the combined inner and outer turning for the presentation of the head; less, however, can I agree with the views as expressed in these text-books, and the more recent operative teachings, regarding the bimanual or combined turning by the feet. This is more or less carefully discussed and recommended, but its applicability is regarded only as an attempt, and entirely confined to those cases in which the waters have not yet broken, and the fetus is moveable within the fluid.

It is claimed that we should not delay with combined turning, in cases where any danger demands immediate delivery, the combined method being too uncertain; and the combined turning should only then be made when the mouth of the uterus is partially dilated, while in complete dilatation the combined turning should not be entertained, or only then when the version of the fœtus can be readily accomplished in this manner. Others give opinions still less positively, recommending the execution of the combined turning where version is indicated at a time when the external manipulations have failed, the inner, namely, with the entire introduced hand, can not yet be executed. When, under these circumstances, the practitioner is already made doubtful whether combined version is only a theoretical teaching, devoid of all practical basis, its acceptance will be much hindered when, as has recently occurred, that such version is condemned by Professors Spiegleberg and Kleinwachter, in just those cases where its advocates specially recommended it, viz: in placenta prævia.

Since the beginning of my clinical experience I have given the method of combined turning my especial attention and study, and have omitted no opportunity to test its applicability. Within the past four years, to the fall of 1876, as assistant of the Berlin Clinic and in private practice, I have made one hundred and eighty-one versions by the feet. The indications of these versions were partially oblique and transverse positions, partly frontal presentations, preventing apparently the advancement of the head, on account of contraction of the pelvis, or a prolapsed funis, or placenta prævia, and other reasons demanding the conclusion of the labor.

In the majority of the cases I was obliged to operate a considerable time after the rupture of the waters, as the nature of an out-door clinic brings with itself. In all these cases external manipulations were without any influence upon the position of the fœtus; and in all I undertook the combined turning, and concluded one hundred and twenty out of the one hundred and eighty-one cases in this manner.

By combined turning by the feet, I understand that procedure by which the greater part of the hand is introduced into the vagina only; then introducing one or two fingers, or in the most difficult cases four fingers, into the os uteri, but always excluding the thumb, and pushing the presenting part to one side of the internal os uteri, at the same time energetically supporting by the externally applied hand, seize or pull down a foot or a knee, which is to be pushed down by the externally applied hand; while by aid of the drawn-down foot the breech is guided into the pelvic brim, the externally applied hand completes the changing of the child by pushing the head to the fundus.

To accomplish this version, the female, with few exceptions, was laid on that side upon which the fœtal feet lay, introducing from behind the hand *heteroime* to that side. As a rule, even when the mouth of the womb was entirely dilated, only two fingers were introduced into the cervix and passed beyond the os uteri. The firmer the impaction of the presenting part of the fœtus, and the more difficult to push the same up, three fingers, or the half of the hand, was used in the first act of the version, for the dislodgment of the presenting part. The dislodgment of the fœtus by this method was not always easily accomplished; especially at times did it cause serious difficulty to push the feet downward by external manipulations.

Nevertheless, out of the one hundred and twenty cases, I have never seen any injury done to the mother by this version. Three of them died shortly after delivery from lesion of the cervix, the effect of forced extraction in placenta prævia; ten in child-bed, and nine of these from septicæmia after placenta prævia. In how far the child has sustained damage by the combined version, cannot, from the manifold dangers attending extraction, be readily ascertained. Forty-four of the children were still-born; of these seventeen were positively dead before version was undertaken, two were not viable, in two embryotomy had to be performed, and twenty-one died during the delivery.

The only obstacle which the combined version cannot overcome, is the firm contraction of the uterus upon the fœtus. The loss of the amniotic fluid alone cannot be of controlling influence in the decision of these cases; for often I have been enabled, some days after the waters had been discharged, to execute the version of the fœtus by the combined method.

When the contraction is of the nature that it requires the introduction of the whole hand to accomplish version, we are only able to answer the question as to the value of this method after production of narcosis; for how often do we not observe how rapidly the versions succeed by the combined manipulations when, under the influence of chloroform or morphia, we begin to manipulate, while just before the fœtus seemed to lie entirely immovable under contractions. Under the influence of the above named agents the irregular spasmodic contractions cease as a rule, and one or two more fingers can be more readily and delicately introduced along the head or the compressed part than the whole hand. Less easily can the contraction upon the fœtus be overcome by long-continued, regular uterine activity, especially if the presenting part has been considerably pushed down.

These are the cases in which the combined procedure for version was without result. Here it was that the introduction of the entire hand alone saved me from the necessity of embryotomy, which latter I have until yet not been obliged to perform, notwithstanding the fact that I have met with quite a number of very desperate cases. Only then should we desist from longer continued efforts by the combined method, when, by long continued labor, the womb is firmly contracted upon the fetus.

The other contra-indications named by authors I have not found verified as such. It is further claimed that the combined turning does not give immediate desired results in cases of sudden danger. I have never more quickly and safely executed version than by the combined method. It is claimed that in prolapse of the hand the combined method cannot be executed. In eleven of my cases there was prolapse of the arm, and the same has never bothered me by the combined version. Furthermore it is claimed that the dead fœtus cannot be turned in this manner. In seventeen cases of ascertained death, in which many of the fœtus were entirely rotten, I have employed the combined turning.

Finally, it is claimed that the combined version was not practicable in placenta prævia. In twenty-nine of these cases I had to execute version, and in all I turned the fœtus by combined inner and outer manipulations, irrespective of whether the placenta was centrally or laterally attached. In all cases the operation was connected with an insignificant hemorrhage; and had I been satisfied with the turning of the child, and not allowed myself to be influenced by the suggestions of others, depending upon the dilatability of the mouth of the womb, and had I not proceeded in these cases to immediate extraction, I should not so seriously have injured those three of the above mentioned patients. Especially in placenta prævia I have learned to value the gentleness of the combined version, and can therefore recommend its use in just such cases.

It may be objected that even according to my figures I have found it necessary to employ the entire hand in thirty-three per cent. of the cases, which seems like a desertion of the combined method. But when it is considered that the number of cases in which the combined method was employed would have been increased by about thirty had I not left the easier cases to the practitioners assisting me; and, furthermore, that in nineteen out of sixty-one cases there had occurred most remarkable errors before the task came to me to execute the delivery, and as already before-stated at times many hours had elapsed before I could reach the patient—it will be allowed that under more favorable circumstances the number of cases requiring the introduction of the entire hand, as an ultimate refuge, would have been greatly diminished.

I am forced to the conclusion, when reviewing the number of cases of version, that the combined method deserves a far greater application than it has hitherto had. Not only should it be attempted in cases of partially dilated os uteri, or in cases of an easily moved fœtus, nor must we go to work timidly and doubtfully, but employ the same patience and perseverance which we have hitherto employed in versions by introducing the entire hand; then we will be enabled to more surely save our patients from the evil results which the version of the fœtus in utero by the inner manipulations not very infrequently produces.—*American Practitioner.*

Editorial.

MEDICAL SOCIETIES.

One of the most interesting features of medical journals, is the department of Society Reports. In them the reader finds discussions on a great variety of subjects, many new and interesting plans of treatment proposed, and examples of their success or failure reported. These advantages are obtained, too, without the time and trouble required for reading long, prosy essays on unverified theories, whose only attraction consists in beauty of style and clever reasoning.

The meetings of societies are indispensable to the medical profession, when attended for the purposes for which they were organized. Most, if not all, of them insert in the fundamental law of their organization, such objects as, "advancement in the medical sciences," "elevation of professional standing," "increase of knowledge in scientific and practical medicine," etc. These are legitimate and praiseworthy objects, and when sought by the members in their reports and discussions, never fail to advance public and professional interests. When, however, members of a society suffer their body used by some *timid* but malignant member, for the gratification of revenge or other improper feeling, they allow it debased in the eyes of honorable men, in and out of the profession.

We will, with pleasure, publish the reports and discussions of local medical societies of this and other States, which have no journal more convenient to them—in fact, we solicit them for the benefit of our readers. As above stated, these form an interesting and useful department in medical journals; and we believe the interest felt in, and the advantages derived from such reports, would be enhanced by a more indiscriminate selection of cases by members. Some mistake the true interest of the profession, in failing to report fatal cases. Neither a desire to be considered always successful, nor the fear of criticism, as some suppose, is likely, we hope and believe, to interfere with the report of unsuccessful treatment. The record made of them is for professional men, who know well that fatal results are too often unavoidable, and that criticisms are by no means justifiable alone in these. Professional interest and humanity require the report of deaths from diseases not usually dangerous, so that if the fatal difficulty is not discovered in time, it may be anticipated by others thus warned. Give us, therefore, the safe and dangerous cases—the successful and unsuccessful treatment.

OBITUARY.—The sad news of Dr. Paul F. Eve's sudden death, in Nashville, on the 3d of November, reached us first through the secular press. Truly, the medical profession mourns the loss of a leading venerable member, the Nestor of American surgery, and of world-renowned reputation.

So widespread is the fame of this laborious and distinguished surgeon, that any eulogy we might dictate would but repeat what is already in the minds and hearts of the public and the profession. As the recipient in early life of his instruction, however, we may feel more keenly the sad loss than those less intimate with his early history.

A special train was furnished to carry his remains to his old home in Augusta, Ga., where his dust will mingle with that of his friends and relatives who have gone before.

Peace to his remains!

ERRATA FOB OCTOBER No.—Page 393, 17th line from top, for *advantages* read *physicians;* page 396. for *botanist* read *botanic*.

EDITORIAL CORRESPONDENCE.

KNOXVILLE, TENN., Nov. 11, 1877.

Editor Atlanta Medical and Surgical Journal:

In the October number of your JOURNAL you say, "Fractures in utero are to us novel." This is doubtless true with all of us. Nevertheless such an occurrence presented itself to my observation many years ago.

In the days of slavery my family cook, a mulatto, had for a husband a free negro, to whom I gave employment. On a Sunday he and his wife were returning, on horseback, from a country ride, and when within a square of my house the horse she was riding had a fright and threw her. The ground was soft from recent rain, hence her fall did her no injury, except that her left leg fell upon a hay pole, which had been cast off by an outgoing wagon. There was not even the mark of a bruise on the leg. She was about seven months pregnant. About dark of the next day she was in labor, and in a few hours was delivered. The child was alive, but soon died. On the surface of the left leg, extending diagonally near the middle of the leg, and corresponding to the portions of the mother's leg that had been in contact with the hay-pole when she fell, was a bruised line, well marked, distinctly so. And both bones of the child's leg were broken. The mother of the child is now, I believe, in Chattanooga.

The *British and Foreign Medical Review*, Oct., 1840, quoting from another journal, refers to fractures of cranium and upper extremities as not unusual, as occurring during parturition; but I presume that the cases of your former and present correspondent do not belong to that category.

Respectfully, DR. FRANK A. RAMSY.

BIBLIOGRAPHICAL.

A Compend of Diagnosis in Pathological Anatomy, with directions for making Post-Mortem Examinations. By Dr. Johannes Orth, First Assistant in Anatomy at the Pathological Institute in Berlin. Translated by Frederick Cheever Shattuck, M D., and George Kraus Sabine, M.D. Revised by Reginald Heber Fitz, M.D., etc. New York: Hurd & Houghton. 1878.

We have been permitted to look so far into the future as to take a glance at this, we presume, valuable book, dated next year. It reaches us so late that a perusal cannot be had in time for a notice of its merits in the November number of the Journal. Having hastily scanned its contents, however, we are rather favorably impressed with the work, and promise ourself the benefit of a thorough reading.

Transactions of the International Medical Congress of Philadelphia, 1876. Edited for the Congress. By John Ashurst, A.M., M.D. Philadelphia. 1877.

These transactions make a volume of over twelve hundred pages, four hundred of which are filled with eleven exceedingly interesting and useful addresses delivered before the Congress on medical subjects, and contributions from the various sections, numbering about sixty-nine interesting papers.

The fourth address was on surgery, and delivered by the late Paul F. Eve, whose death is noticed in this issue of the Journal. This was the last public act known of this remarkable man. His opening remark is so unique, and strikes us as so characteristic of this native Georgian, that we copy as follows:

"Gentlemen of the International Medical Congress:

"The language of the aborigines of America has ever been admired for its simplicity and significance. In the State of Mississippi, itself implying the father-of-waters, is a county called Itawambi, derived from the title given an Indian chief, upon whom all possible honors had been conferred, so that nothing more could be done for him. Standing here this day, the representative of the most demonstrative and efficient department of the healing art—the recipient, too, of many unmerited favors—fully conscious of the inability to do justice to the subject proposed, or satisfactorily improve the illustrious occasion—an event without precedent, and which no living man will ever see again—language fails to convey or words express what is now felt. With all the simplicity of the Indian, and the sincerity of the Christian, I would say to you, my professional brethren, who have done so much for me, *Itawambi*."

The Transactions, taken altogether, will be found unusually interesting and instructive.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE—Edited by Dr. H. Von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. xii.

The twelfth volume of this library of medicine treats of diseases of the brain, and its membranes.

The five authors of the matter contained in the volume contribute as follows:

Nothnagel—230 pages, on Anæmia, Hyperæmia, Hemorrhage, Thrombosis and Embolism of the Brain.

Obernier—28 pages, on Tumors of the Brain, and its membranes.

Heubner—82 pages, on Syphilis of the brain and nervous system.

Huguenin—447 pages, on Acute and Chronic Inflammations of the Brain and its membranes.

Hitzig—60 pages, on Hypertrophy and Atrophy of the Brain.

The following pamphlets have been received:

Report on Dermatology, Syphilis, and other Exanthemata. By Lunsford P. Yandall, Jr., M.D., Prof. of Therapeutics and Clinical Medicine, University of Louisville. Reprint from the transactions of the Kentucky State Medical Society, 1877.

The Cause and Geographical Distribution of Calculous Diseases. By Claudius H. Mastin, M.D., of Mobile, Ala. Extracted from the transactions of the International Medical Congress, Philadelphia, September, 1876. Philadelphia, 1877.

Address on Medical Biography. Delivered before the International Medical Congress, September, 1876. By J. M. Toner, M.D., Washington, D. C. Philadelphia, 1876.

Strictures of the Urethra; When and How shall we Perform Internal Urethrotomy? By Claudius H. Mastin, M.D., LL.D., Mobile, Ala. From November No. Richmond and Louisville Medical Journal, Louisville, 1877.

Treatment of Diphtheria. By E. N. Chapman, A.M., M.D., late Professor of Obstetrics, L. I. College Hospital. Baker, Jones & Co., Buffalo, 1877.

Poisonous effects of Cyanide of Potassium. By Joseph Jones, M.D., Professor of Chemistry and Clinical Medicine, Medical Department University of Louisiana, etc. From the *New Orleans Medical and Surgical Journal*, May, 1877.

The Discovery of Anæsthesia. By J. Marion Sims, M.D., Reprint from *Virginia Medical Monthly* ,May, 1877.

EXCERPTA.

Oldoini on the Treatment of Croup.—Dr. S. Oldoini relates in the *Annati, Universali* for March, five cases of croup observed during the epidemic at Spezzia, in which he successfully employed copaiba and cubebs. His plan was to give to adults, every two hours, a dessert-spoonful of a syrup composed of 14 grammes (about 5 ounces) of balsam of copaiba, 20 grammes (about 7 ounces) of powdered gum, 50 grammes (about 17½ ounces) of water, and 14 drops of essence of mint; and also, every two hours, a table-spoonful of a mixture consisting of 12 grammes (186 grains) of recently powdered cubebs, and 24 grammes (8 ounces) of syrup. For children, the dose was reduced. The malady disappeared in a period of two or three days, rarely extending to seven.

Four of the five cases were children under four years of age; some affected with simple croup, others with croup complicated with diphtheria. The condition of the patients, when first put under treatment, was very grave; there was high fever, the submaxillary glands were engorged, the voice and crying were weak, the cough harsh, and there was marked dyspnœa. The beneficial effects of the medicine above described occurred without the use of emetics, mercurials, or any other treatment.

The Relation of the Blood to Vaccinal Immunity.—The author has endeavored to prove experimentally what vehicle conveys to the vaccinated organism immunity from small-pox. Acting upon the probability that it was the blood, he introduced beneath the skin of children who had not been vaccinated a drop of blood from vaccinated children. As the length of time after vaccination might have an effect upon its power of inoculation, he took blood at various periods after vaccination from the first to the fortieth day. In spite of all, the result of the collective experiments, thirty-five in number, was absolutely negative. In two cases the blood was taken from the immediate vicinity of the pustule, but this blood was also not inoculable. In five cases trial proved that the vaccinated children were susceptible to the influence of the virus. As it was possible that the failure was due to the small amount of inoculated blood used, the author tried transfusion of blood in animals. Two hundred and fifty grammes of blood was withdrawn from the jugular vein of a heifer, upon which, at the sixth day after vaccination, the pustule was perfect, and transferred into another heifer three months old. During the next five days nothing abnormal was seen in the condition of the animal. Fourteen days later sixty inoculations were made upon the chest with fresh vaccine; nevertheless not a single pustule was developed, while another heifer, inoculated with the same virus, showed a splendid eruption. It follows, therefore, that under certain circumstances the blood is the vehicle of the material which gives immunity to the organism. The author has observed no indication upon the surface of deeper alterations produced by the transfusion, except the failure of vaccination. The objection which might be made to the experiment, that the animals experimented upon were protected by previous inoculation, is according to the experience of Chambon, exceedingly improbable, as in eight years' practice upon heifers, there has never occurred a single case in which the inoculation was without result.—*Raymaud Comptes Rend.*, 84.—*Allg. Med. Cent.-Zeit.*

SOMETHING NEW ABOUT OXYGEN.—Recent investigations have disclosed the singular fact, that oxygen under high pressure, rapidly destroys all living beings and organic compounds. All the varied phenomena of fermentation, in which the chemical action depends upon the presence of living organisms, are completely arrested by the action of compressed oxygen, even if exerted for only a brief time; while fermentations due to dissolved matter, like diastase, perfectly resist its influence. M. Bert, to whom this curious discovery is due, has found a practical application of it in the field of physiological research. The ripening of fruits is arrested by exposure to compressed oxygen, and hence it must arise from cellular evolution. The poison of the scorpion, on the other hand, whether liquid, or re-dissolved in water, entirely resists the action of the compressed gas. Such poisons evidently owe their power to chemical compounds akin to the vegetable alkaloids. Fresh vaccine matter, subjected for more than a week to oxygen under a pressure equal to fifty atmospheres, retained its virtue; from which it would appear that the active principle in vaccine matter is not certain living organisms or cells, as some have supposed. The virus of glanders, after similar treatment, quickly infected horses inoculated with it; and carbuncular blood, though freed from bacteria, was found to retain its dangerous properties after the same test. These must, therefore, be put in the same class with vaccine matter.

If these results are confirmed by further investigations, the discovery is certainly a most important one, and will lead to the settlement of many disputed questions in physiological chemistry.—*Journal of Chemistry.*

POISONING BY SANTONIN.—Prof. Binz, of Bonn, has just recorded an interesting and important case of poisoning by santonin, which came under his observation two years ago. The patient was a delicate child, twenty-five months old, who, about 6 A.M., took two lozenges, each containing .025 milligramme of this drug. At 4 P.M., without any previous warning, sudden clonic convulsive spasms set in, commencing at the left angle of the mouth, and thence spreading over the left side of the face. These were succeeded by similar spasms in the right arm, beginning in the fingers. A quarter of an hour after, a tonic spasm invaded the left side of the face and left arm, then rapidly disappeared, leaving a fibrillary twitching of the muscles of the left angle of the mouth and left eyelid, which soon afterwards ceased quite suddenly. Two more convulsive attacks occurred on the same evening, and in one the respiratory movements threatened to come to a standstill, although the heart was beating quite strongly and the pulse was normal. Two or three similar fits occurred daily at intervals for the next four or five days, after which the child was as well as before. During this time the urine was of the peculiar greenish-yellow color which has been noticed after the exhibition of this drug. Prefessor Binz suggests that the localization of the convulsive spasms on the left side of the face was due to its being smaller and less developed than the right side, thus "making it a place of less resistance." As santonin is not included among poisons in works on forensic medicine, the best treatment of such a case is a question of much importance, and to decide this, as well as its physiological action, some experimental investigations were made on cats, rabbits and frogs. Professor Binz injected weak solutions of santonate of soda in water, and found that the mesocephalon was first attacked, and that the convulsions principally affected the muscles supplied by the third, fourth, fifth, sixth and seventh cranial nerves. The spinal cord and the general muscular system were afterwards involved. There was no disturbance of the hearts action or of the blood pressure. Numerous observers have already described the peculiar effect of santonin on vision, causing objects to appear yellow and green. Nitrate amyl, morphia and artificial respiration, were powerless against the spasms, although the latter must be employed to ward off asphyxia from paralysis of the diaphragm. Ether and chloroform arrested the attacks if given at their very commencement, and always lessened their severity and duration. Hypodermic injections of chloral hydrate had much the same effect, so that we have in these agents very powerful physiological antidotes against the action of the poison, whilst we wait for its elimination.

The extremely prevalent use of santonin as a vermicide by the profession, and its common sale in worm powders and worm lozenges by every druggist, made the above case and observations of more than ordinary significance. Its occasional toxic action on the cerebrum has been noticed before, and referred to by several writers; but that it could induce such severe symptoms was not generally known, and it behooves us to give the drug with more precision, and watch its effects with more care, than has been the usual custom. The quantity taken in this instance—viz., a mere fraction of a grain—seems very small to have produced such a serious result; but as the child has never suffered from any convulsive symptom before or since, and as the urine was so evidently colored by the drug, we must either suppose that there was an unusual susceptibility to its action, or, more probably, that by some mistake the dose was much larger than was inferred from the lozenges that were analyzed. The effects on the lower animals prove its toxic power, and leave no doubt as to the necessity of our using the remedy much more sparingly than we do at present; and we are at least bound to take some trouble to ascertain the probable presence of worms in a child's alimentary canal before administering a medicine which may occasionally even act as a poison.

THE TREATMENT OF TAPEWORM.—Prof. Mosler has been advocating a system of treating tapeworm, which, according to a Swiss medical journal, has been attended with remarkable success. Its chief characteristic is the injection of large quantities of warm water into the colon, after the administration of the anthelmintic. The diet is first regulated, food being given which is supposed to be distasteful to the tapeworm—bilberry tea, herrings, sour cucumber, salted meats. The intestine having been, as far as possible, emptied by laxatives, a dose of the extract of pomegranate bark is administered, prepared from the fresh bark, and then a large quantity of warm water is injected into the rectum. The theory is that the worm, previously brought down into the colon, is prevented by the water from attaching itself to the wall, and is brought away by the liquid on its escape. It is asserted that in every case in which this treatment was adopted, the head of the worm was removed.

DEATH FROM CHLOROFORM.—A patient who was about to submit to an operation for perineal fistula, died while under the effects of chloroform, recently, at the Blackburn Infirmary. There was nothing unusual in the case, and the post-mortem appearances were those of asphyxia. The case resembled many others in this, that death ensued quickly on the stage of struggling. We have often, when commenting on these cases, taken occasion to call attention to the danger which attends this stage of chloroform narcosis, when, owing to the rigid state of the muscles of respiration, the dangers of asphyxia are superadded to those which are inseparable from the use of chloroform. Whenever tonic muscular contraction ensues, the administrator should cease giving the anæsthetic, and watch the patient narrowly. The tonic muscular contraction is never of long duration, and its appearance is usually a sign that the patient, though unsteady, is, nevertheless, powerfully under the influence of the drug.—*London Lancet.*

THE POSITION OF (THERAPEUTICAL) DAMIANA.—Commenced in quackish style, damiana has come to a finis easily foreseen. Dr. L. P. Yandell, Jr., of Louisville, tells what he knows about it in a recent paper. He says, "Damiana is almost certainly an unmitigated fraud. Three distinct vegetable products are sold under the name. While it may have produced some very remarkable results, these have been brought about, in all probability, through the imagination of the patient. Could a medicine be discovered possessing the aphrodisiac power attributed to damiana, half of the arable land of the earth would be devoted to its cultivation, and the supply would then not equal the demand."

Good-bye, damiana, and the bright hopes you fostered.—*Medical and Surgical Reporter.*

NYMPHOMANIA IN A MARE CURED BY CHLORAL.—A mare that was affected with nyphomania to such a degree that she was useless for any sort of work, was recently brought to the veterinary surgeon, Ritz, of Berlin. The following were the chief symptoms: wildness, general emaciation, eyes haggard, conjunctiva injected, pupils dilated, prehension of food irregular, mastication slow and occasionally intermittent. To calm the genital excitement, Ritz ordered twenty grammes (5 drachms) of chloral to be administered, dissolved in the drink. After a few days, the nymphomania disappeared, and the mare gradually recovered, and gained flesh rapidly.

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Original Communications.

AN ESSAY ON BELLADONNA.

BY J. S. TODD, M.D., ATLANTA, GA.

Read before the Atlanta Academy of Medicine November 20, 1877.

The tendency of the world to run after new ideas and dogmas, however absurd, finds no more complete exemplification than the avidity with which medical men seize hold of new remedial agents. Is it that our stock of curatives is so small, or are those we have so little worthy of confidence? Which? The voluminous pages of our Dispensatory answer negatively the first question—the pecuniary success of fluid extract manufacturers of latest discoveries, affirmatively the latter. I very naturally ask what is the cause of our want of faith? It is a fact beyond dispute, that therapeutics has not kept pace with the progress of surgery, pathology and chemistry. Indeed, while pathology has shed a flood of light upon our knowledge of disease, to say the least, it has not accomplished what was expected of it; on the contrary, I am sure that the ardor of the therapeutist has been dulled by the teachings of pathology, which, alas, so often shows that the malady, by its very nature, is incurable. Too much knowledge renders him hopeless of curing with known medicines, and he adds new remedy upon remedy, until their name is legion, in his eager career after potential agents. The search after a universal remedy has been abandoned, but it does seem that the vulgar idea that for every disease there grows some plant that is its antidote, has taken deep hold upon investigators. Have we so few drugs that will serve us when we are in sore distress? Have the potential powers of agents once equal to the emergency been with their advocates consigned to the grave?

This is an age of progress, and I am not one of those who believe that the first Adam was superior in all things to the average man of the nineteenth century; but, on the contrary, am sure that in all the attributes that go to make us more perfect—more like God—we are immeasurably his superior. We know more of the *science* of medicine than did Cullen, Letsom, Abernathy, Physic, or Rush; but I am not certain that we caught their art of administering remedies. The ship of progress, though it may speed on its way ever so rapidly and evenly, has, like every other vessel, in its hold ballast—materialism, if you will—and there is among its freight some article which would with least regret be sacrificed to the angry sea soonest when the storm arises. Of medical goods I opine and hope a large part of the vis medicatrix naturæ—another name, too often, for skepticism about the power of medicine—and stimulation will be first cast overboard. It is not my intention to discourage the investigation of the truth in any of its fields. I say God speed to them all, pathologist among the rest; but if I could put the investigators—three-fourths of them—to studying more closely the action of known remedies, then would my object have been accomplished. I want to increase my understanding of the action of opium, mercury, cinchona, aconite, nux vomica, belladonna, turpentine, cantharides, arsenic, colchicum, and others of this old respectable class of drugs that have stood the test of time. I want Drs. Johnson, Miller, Alexander, or J. G. Westmoreland, to tell us in essays of their first love—that we boys have weaned them off from by *stimulation*—their trusty weapon in the days gone by: *the lancet*. I am sure we would listen; I am sure suffering humanity would not be the loser.

The subject I have chosen is Atropia Belladonna. I selected it because it was of the class of drugs about which so much is known, and—pardon me—so much forgotten: because it has so many virtues unknown, though it has been an agent so long used by our fraternity. If one of us was compelled to confine himself to a dozen remedies, I do not believe that belladonna would be one of them; it is, in fact, a drug not appreciated according to its deserts.

In collecting *facts* regarding its virtues, I have been astonished that we regarded it so lightly. This being true of belladonna—one of our lesser agencies, so considered—what would be our emotions if we studied more closely the recorded *truths* concerning opium or mercury. More experiments with fifteen or twenty old remedies, and less with new ones, will do much to dispel the skepticism that imbues us. The vast importance of atropia as an agent in diseases of the eye, is so well expressed by Dr. Earnest Hart, Opthalmic Surgeon to St. Mary's Hospital, England, in the *British Medical Journal*, April, 1872, that I give it almost entire, feeling sure that to many a country practitioner, where specialists are not to be found, it will be useful.

Dr. Hart does not think he shall be using an exaggerated form of expression, or going beyond the strict and well balanced weight of words which is necessary to give due force to the fact to be conveyed, if he says that we could, in the treatment of opthalmic disease, better afford at this day, so far as our knowledge of disease and means of mastering it extends, to dispense with all other drugs, lotions, and applications put together, than with this one topical medicament. Let us consider what atropine does for the inflamed eye. It allays local sensitiveness, and removes local spasm; it gives to the eye and internal muscular apparatus—iris and ciliary muscle—physiological rest, the greatest of all curative means. Nor does it do this only, but, in dilating the pupilary aperture, it drives far from us the bug-bear which long haunted the opthalmic surgeon, and which still pursues those who are not sedulously active in the use of atropine—closure of the contracted pupil by an adherent plug of lymph, and gluing of the posterior surface of the iris to the lens. It would rob the consulting surgeon of a great many profitable but trying operations, if the atropine eye-drops were ready in every surgery, not only on all emergencies, but for the exigencies of daily practice. It is as safe a rule in opthalmic practice to use an atropine drop, when in doubt, as in whist to play a trump. Dr. Hart can hardly think of more than one absolute contra-indication, and that is the existing oval dilatation of the iris in glaucoma. There are, of course, also mechanical contra-indications, as in peripheral wounds of the cornea with hernia of the iris, when to dilate the iris is to increase the peripheral protrusion; but, even here, the moment the corneal gap is healed, atropia becomes of the first necessity. But in all cases of iritis, in contusions and injuries of the eye, in corneitis, purulent ophthalmia, scrofulous ophthalmia, and deep-seated, mixed inflammations of the eye, the local application of a solution of atrophia is the most precious of therapeutic means. * * * * With a little cotton wool, alum, and glycerine, hot and cold water and atropine, and a pocket case of instruments, we can treat, with a previously unattainable success, nearly the whole range of opthalmic diseases. * * * It is possible, but not easy, to abuse atropine. His formula for its use, is—

℞.—Atropia sulphate, ...	grs. ij.
Glycerine, ...	gts. v.
Aqua distilled, ...	℥ j.

When the sulphate cannot be procured, a drop or two of acetic acid will be necessary to cause the alkaloid to make a perfect solution in water.

As a remedy for constipation, extract of belladonna, given before breakfast, in one-fourth grain doses, possesses advantages not sufficiently appreciated. It does not gripe, nor does it interfere with digestion; it is easy of administration, and causes semi-solid evacuations, as healthy in appearance as those produced from any other laxative. Dr. Morris, in the *London Lancet,* relates four cases of intestinal obstruction which resisted every remedy which could be devised. Thinking the obstruction might be caused by violent contraction of the circular muscular fibers of the bowels, two grains of extract of belladonna were passed up the bowels, and in about two hours a copious discharge of hard scybala followed, with a cessation of all the distressing symptoms consequent on the obstruction.

Prfessor Bartholow, of Ohio Medical College, who has recently written the best treatise extant on therapeutics, and is, withal, one of the most profound thinkers of the age, in a prize essay written in 1872, and read before the American Medical Association, on atropia, called attention to the usefulness of this agent in allaying the night-sweats of phthisis. This discovery has been appropriated very coolly by Dr. Ringer.

of England. Dr. Fothergill, in the *Practitioner*, 1876, giving his experience with atropine in the treatment of night-sweats, says that "the public, as well as the profession, are under a deep debt of gratitude to Dr. Ringer, for this discovory." That atropine, or belladonna, does possess the power of curing night-sweats, or hydrosis of any kind, is, beyond a doubt, the fact, having been fully demonstrated by numerous competent witnesses. Belladonna seems to be a specific anhidrotic, (an agent that prevents profuse perspiration) acting on the sudoriferous glands as it does on the submaxillary gland. I know, by practical experience in several cases, that there is no agent that will afford so speedy and marked relief in ptyalism as small doses of this drug—say from one-sixth to one-fourth grain of the extract of belladonna *ter die.* I would suggest that a trial be given the drug in follicular pharyngitis, when the secretion is excessive, and in chronic laryngial and pharyngial inflammations generally, where the secretion of mucus was too great.

As a remedy for incontinence of urine, or where there is irritability about the neck of the bladder, I know of nothing which has given such gratifying results in my hands. Two years ago a member of the Academy casually mentioned his success with belladonna in the malady above mentioned. It caused general surprise, the novelty of the idea. I was among those to whom this virtue of the drug was new, and yet in the dispensatories out of date, it is advised that it be given where "there is incontinence of urine, spasmodic stricture of the urethra, or neck of the bladder." This is an apt illustration of our inexcusable ignorance of the virtues and potencies of drugs which have served us from time immemorial. Belladonna has long been recognized one of our best agents to arrest the lacteal secretion, either given internally, or rubbed on the areola of the breast, or applied to the gland as a plaster. This local action of belladonna directed the attention of Dr. Sidney Ringer, F.R.C.P., to its effects as a local application, either in liniment or ointment. He first employed it "in a case of unilateral sweating of the right side of the neck and face, breaking out upon the slightest exertion or excitement, or when near a fire, so that the sweat ran down his face and neck in streams, soaking his collar and the band of shirt, his face being neither red nor congested;" the application of the belladonna liniment, in a short time effected a cure. The writer also mentions many cases cured by its local application, in young children, where the copious sweating of their head and face is aften so profuse as to wet their hair, and the pillow on which they are sleeping. Of course, with so poisonous a drug, much precaution is necessary, that we be careful not to apply, if there are abraded surfaces, or in so great a quantity that its absorption by the skin may produce alarming symptoms. Topically to sweaty hands and feet it has wrought many cures according to the same authority.

As a local application to rigid *ores tincarnum*, to swelled testicles, to strangulated hernia and indurated glands, it is one of the orthodox agents. Its power of doing good in obstinate intermittents, where the nervous system has become affected, though often mentioned by writers, is too little regarded. Its prophylactic power over scarlet fever, while not proven, is asserted by many to be very great. For myself, I will say that the probabilities of its doing what is claimed for it as a preventive of this terrible disease, is, in my mind, so fixed that I shall always avail myself of it. The possibility of its causing harm in the dose recommended—one drop *ter die*, of a tincture made from one grain to two grains of the extract to one ounce of alcohol (Dr. Flint)—is not a question for serious consideration. While I do not believe that belladonna is an antidote to opium, candor compells me to admit that the testimony in favor of its antidotal power in cases of opium poisoning, has decided preponderence, so much so that I would probably not be justified, if I withheld it in a case terminating fatally.

Recently arsenic and belladonna are attracting the favorable attention of profound thinkers in the cure of phthisis. So much so that Dr. Fothergill—one of *the* eminent men in our profession—says, "I have no hesitation in saying that the use of this agent (atropia) completely changes the aspect of many cases of pulmonary phthisis. It has been much more cheering since I employed belladonna extensively." Prof. Bartholow, of Ohio, in an exceedingly interesting article in the *American Journal of Medical Sciences*, April, 1877, "On the treatment of certain forms of phthisis pneumonalis by rest and the internal administration of atropine," gives in full the history of two cases, one of which is so instructive that I synopsize it: Mrs. R., æt. 25; married; weight 95 pounds; slight figure; narrow chest; three sisters and both parents had died of phthisis; cough for several years, which was now almost constant; depression extreme; took but little food; hectic; profuse night-sweats; menstrual flow ceased; temperature habitually above 100 degrees; in the evening 102 degrees; respiration 40; expectoration purulent. Physical examination showed consolidation of superior lobe of left lung, softening and extrusion, with cavities; commencing deposit in apex of right lung. She spent the most of her time confined to her room or bed. Treatment—a solution of atropia, grs. j to ʒij of water, of which she took two minims, morning and evening. The prescription was first made in 1867, and owing to a misunderstanding she took it in increasing quantity for two years. He was several times summoned to see her, during this period, in consequence of decidedly toxic symptom. An improvement which is only characterized by the word wonderful has occurred; the cough lessened; the sweating and fever ceased; the menses reappeared; she became enciente; during that time appeared in vigorous health; was delivered of a healthy child in 1871, and now, ten years after he first saw her, she is in excellent health; weighs 115 pounds, etc. In the other case, he was equally as successful, and eight years has elapsed since treatment was begun. He says he has quite a number of cases, but withholds their publication until a sufficient time elapses after treatment to make them trustworthy.

Alcohol has long been considered one of the best remedies for phthisis. An analogy between the action of alcohol and belladonna is not difficult. According to Headland, (one of the very best authorities on the action of medicine) alcohol and belladonna are classed as narcotics—the first an inebriant narcotic, the last a delirient narcotic. As a direct cardiac stimulant, Dr. Horatio Wood, Jr., of the University of Pennsylvania, says no agents, not even ammonia or alcohol, are so powerful as minute doses of atropine. It is, therefore, one of our best remedies in all cases of poisoning or accident, where death is imminent from failure of the heart's action.

As an adjuvant in the treatment of nervous disorders, especially neuralgia, belladonna has long been favorably known. As a substitute for opium it will almost always disappoint; but the uses to which belladonna, in conjunction with opium, can be put, that will materially enhance both, are so many, that an article on either, would be incomplete if they were omitted.

Remember that the belladonna causes delirium, hallucination, etc., while the other, opium, stupor, quietude, sleep, and entire relief from pain; combine the two, and the latter, cessation from pain—the pleasantest and most thankful office of the physician—can be procured, and still your grateful patient can, with intellect wide awake, discharge his ordinary duties.

Opium depresses the action of the heart; atropia stimulates it; between the two, generally, the cardiac impulse will not be affected. Belladonna is more lasting in its action than opium, and this virtue of the former materially lessens, sometimes completely obviates, the depression, nausea, and dullness that follows an hypnotic dose of the latter. The pain-relieving power of opium is enhanced by atropia. Both produce dryness of the mucous membrane of the mouth and fauces. Morphia suspends, atropia increases peristatic movements. Morphia increases the action of the sudoriferous glands, atropia lessens it; in combination the action of the two on the kidneys is to increase the flow of urine.

It seems to be the general verdict of late experimenters that two doses a day of atropine is all that is requisite, as it is very lasting in its action. As its employment in the sweating of phthisis—though established as one of our best agents—is somewhat new, it will probably be well that I give the general dose adopted in the London Hospitals. Dr. Ringer gives from $\frac{1}{200}$ to $\frac{1}{100}$ of a grain of atropine, hypodermically, and from the $\frac{1}{80}$ to $\frac{1}{50}$ per orem. Dr. Fothergill, who states that he had, at the time he wrote the article from which I quote, one hundred patients in the various hospitals in London, on atropine; that, while he has no experience in the drug given hypodermically, he commences, per orem, on the $\frac{1}{75}$ and gradually increases to the $\frac{1}{25}$ if necessary, the latter dose rarely failing. After the sweats are broken, the minimum dose will prevent their return, and generally the patients will not complain of the toxic action. If the atropine or belladonna purge, the union of ½ to 1 grain of aloes to each dose will obviate this effect. The cases most favorably influenced by it, says Dr. Fothergill, are those who have a fast pulse, above 100, a temperature at and above 100 degrees Fahrenheit, cough, profuse night-sweats, and rapid wasting. In conclusion, I think I hazzard nothing in asserting that if half the testimony I have adduced in favor of atropine, could be gotten for fluid extract of grindelia robusta, yerba santa, glycerite of kephaline, and other new drugs, in the treatment of phthisis, there would be no difficulty in having their virtues thoroughly tried. Indeed, their favorable consideration and general testing would not require such names as Bartholow, Ringer, or Fothergill.

NOTE.—After my Essay had been read and discussed by the members of the academy, it was requested that I go more fully into the theory of the action of belladonna. The paper was only intended to excite an interest in a drug that was looming up so prominently, and to do this, I thought *facts* were worth more than theory; and, beside, the usual length of such papers forbade anything like an exhaustive treatise. A reference to almost any standard work on therapeutics, will give in full its action better than I, with my inexact ideas, would presume to essay. "Blessed is he who knows the reason of things, for such knowledge is not superficial," is an aphorism, which, if rigidly applied to our understanding of the action of medicines, the why and wherefore, would in the large majority of instances, inevitably lead to the conclusion that our information was superficial. Nevertheless, we *know* that opium relieves pain, sulphur kills the acarus, quinine cures ague—how, we will probably always be left to conjecture.

To describe the action of hæmatirics, catalitics, astringents or alteratives, is easy, in comparison with any attempt to give the modus operandi of neurotics. "When we consider that little or nothing is known, or can be known, about the ultimate cause of sensation or motion or nervous excitement, there is no need for wonder that we find ourselves at a loss to explain the operation of medicines that influence these conditions." For these very cogent reasons, I confined myself to *what* belladona did, deeming it almost impossible to tell *how*. But as the request was preferred, I will say something about the physiological action, &c.

Many theories have been enunciated to account for its action in dilating the pupil. The one which seems to my mind better suited to explain, not only this effect of the drug, but also its cathartic action and undoubted power of relieving pain, when locally applied, is this: It paralyzes the nerves—ciliary branches of the sympathetic system—of pupilary accommodation. Dr. Harvey contends that it causes dilitation by stimulating the radiating fibres of the muscular apparatus of the iris.

I cannot subscribe to this theory, for several reasons—among them, light is a stimulus to the pupil, causing it to contract, while darkness being the contrary, causes dilatation. And again, I believe its action is on the nervous system, not the muscular or arterial, except *a priori*. The dryness, so characteristic in the throat and fauces from belladonna, is, doubtless participated in by the stomach and bowels, but this condition is in them mere transitory, and increased secretion quickly followed by catharcis, is the result. Given to persons of light complexion, especially women, a difiuse redness of the skin, bearing very near resemblance to scarlitana, is occasioned. This shows that it is a stimulant to cutaneous circulation; hence, the rationale of its curing night-sweats. But here it might be very reasonably urged by those who maintain that it dilates the pupil by stimulating the muscular fibres *per se*, that the redness of the skin was confirmatory. The impossibility of getting a theory to fit all actions of any neurotic, is apparent. Ergot, we know, causes uterine contractions—increased *muscular* action of that particular organ—yet the heart, a large, strong muscle, is so little interfered with that it escapes notice in the large majority of cases where ergot has been given. The leaves of the deadly night-shade, steeped in water and applied to cancerous ulcerations, was at one time esteemed among the best agents known to relieve the pains of carcinomatous ulceration, and the practice has been discontinued only because we could not regulate the amount that would be absorbed, hence toxic symptoms were not infrequent. But how does it relieve pain? Here another lion is in the path. What is pain, and where is its hiding place? What causes it? In this case—the cancer—I think the pain is caused by muscular contractions—spasmodic action of those muscles or fibres supplied by sympathetic nerve filaments. The atropia here, as in the iris, *through the nerves*, causes paralysis and cessation of motion in the muscles, and pain, as a consequence, ceases, the cause being removed.

Reference was made in the body of this paper to small doses of aloes preventing the cathartic action of the extract of belladonna. This may appear paradoxical, like two wrongs making a right; for two cathartics given in combination counteracting each other, is, I must confess, like two negatives being equalled to a positive. But experience, that fell, ruthless puller down of the finest spun theories, says it is a *fact*, and all facts have reasons for their action. I think I can, if you will bear with me, reconcile these apparent contradictions. To do this, we must know that aloes expends its *principal* force on the large intestines, the peristatic contractions of which it increases by irritating the mucous membrane, the nerves of which supply their muscular coat. Now, these very nerves are to a certain degree paralyzed by belladonna; increased patulence of the intestinal tube resulting from the paralysis, permits of more rapid movement of the ingesta: give aloes in small doses, and the irritation it occasions prevents this peculiar action of belladonna, and vice versa. The result is, no disturbance—catharsis is not occasioned.

Narcotics, for convenience, may be divided into three classes—somnolant, inebriant and delirient. Opium, a representative of the first, causes sleep, but leaves the mind free, for we dream while under its influence. Alcohol, which is typical of the second, in full or toxic dose, causes drunkenness, which is a cessation of volition, motion and intellection. Belladonna, a head representative of the last division, while paralyzing slightly the senses and motion, leads all astray, so to speak. It causes delusions, hallucinations and busy delirium; rarely somnolence. Hence, it should be withheld in delirum, congestion of the brain or cord, &c. It increases the number of respirations, and for this reason, mainly, has been urged as an antidote to opium. Voluntary muscular motion is not affected by atropia.

These desultory remarks on the physiological action of atropia are as incomplete, I feel sure, as were those on its known effects; but if they excite sufficient interest to cause a study of the many excellent monograms that have been written on atropia belladonna, I will be repaid for my labor.

BOTANY IN ITS RELATIONS WITH MEDICINE—No. 3.

By W. T. Grant, M.D., Atlanta, Ga.

It cannot be amiss to give a short explanation of the rule which obtains in reference to botanical nomenclature. In botany, as in other branches of science, the names are all double—the first being the *generic*, and the second the *specific* name. The generic name is, we may say, the *family* name, just as it is with the Smiths, the Joneses, etc., while the specific name is the personal or individual title, like the given name in a family, as John, William or Mary. We have, for instance, a family of Smiths consisting of John, Thomas, Joseph, and Mary Smith. All of them bear the common family name of Smith, as it is the family name. But each one has another and individual name, by which each is known and distinguished. So in botany, the generic name is the family name, common to several distinct species, each one of which has likewise its distinctive individual name, which is its *specific* title. Thus we have the genus solanum, and under it are the several species: solanum nigrum, s. tuberosum, s. carolinianum, etc. And, as in the family name among men there is a connection between the different individuals composing the family, so there is between the different species of a genus, but of course in a different way. It is blood-relationship in the family, and resemblance, more or less close, in the species.

As in society we find that communities are made up of several families, so in botany we find that several genera, more or less connected with each other by resemblances, are classed together, and the group thus formed, is designated a *natural order*. As we will find that the village of Richland is composed of the several families of Smiths, Joneses, Jacksons, Williams, etc., and as thus the individuals of these families may properly be called Richlanders, so with the different species forming the genera which together go to make up any natural order in botany. As, for instance, in the natural order *ranunculaceæ* we have the several genera, *aquilegia*, *ranunculus*, etc. Every species under these genera is called a ranunculad, or, as the common name is better known, is called a crowfoot.

The generic name in botany has no certain origin, but is mostly, I believe, given from men's names—generally he who gives an accurate description of a new genus has his name cônferred upon it. The specific names are variously derived, but are most generally founded upon some characteristic of the plant, and most commonly upon the leaf.

It is a common opinion that because a plant is aromatic in odor, or pungent to the taste, it therefore possesses some valuable medical properties. My observation of plants leads me to the conclusion that the reverse is more apt to be true. These aromatic plants have their cells filled with aromatic oils, which are generally as innocent of any really valuable medical properties as the volatile or essential oils of the shops, which are only useful as a vehicle or disguise for other remedies. *Stomachics* they are magniloquently called, and it is a great pity that these grand names do not confer some virtue.

If it were true that plants possessed medical virtues *because* they are aromatic or pungent, then a large part of the plants belonging to *leguminosæ, labiatæ scrophulariaceæ,* and other allied natural orders, would be available. Besides these, the entire class of *umbelifers*, nearly every one of which is poisonous, would in that case furnish a valuable resource to the physician. But it is otherwise. And I do not now remember any really valuable plant which possesses aromatic properties.

The old and well-known *krameria lanceolata* (the rhatany of the shops) is a native of Georgia, but so far as I know, does not grow anywhere except on the left bank of the Little

Ocmulgee river, in Montgomery county. I need not speak of its properties. The restricted limits within which some plants grow, (as in this instance) is quite remarkable. Although I have botanized in nearly all parts of Georgia, I have never found the American cowslip, except in one locality—and then but a few individuals at that—in Crawford county. I know of others which have such limited range.

Another old acquaintance, the *chimaphila maculata*, grows quite abundantly in Clarke, Madison, Jackson, Hall, and other eastern counties, where it is popularly called wild arsenic. It is also found in Fulton county, where it passes under the name of wild ratsbane. This plant is blessed with several common names, as follows: spotted wintergreen, princes' pine, and pipsissewa.

I have had a limited experience with the chimaphila maculata in dropsical swellings, and can say that I shall always prefer it to anything else, when I can procure it. And I believe that it is valuable in any form of dropsy, without reference to its cause or locality.

In one case a woman was attacked by measles immediately after a confinement, and in recovering she had anasarcous swelling of the feet and legs up to the knees, so that she almost lost the use of her lower limbs. The recovery was very prompt and complete, under the use of a decoction of the chimaphila. Another case, a man similarly diseased with anasarca of the lower extremities, was also promptly and effectually relieved. I used it as follows: An ordinary handful of the herb (root, stem and leaves altogether) to about one gallon of water, and boiled to half a gallon. This should color the water very considerably—give a black tinge to it. Of this decoction one pint should be taken every day.

I do not think that pipsissewa has any dangerous qualities whatever. I refer the reader to Dr. Porcher's book, "Resources of the Southern Fields and Forests," for further information about this plant. It is undoubtedly one of our most valuable and reliable resources, and deserves more attention than it has received. I know a physician who says that he has used a thousand gallons of the decoction, which would indicate good service in his hands.

I do not know whether the *sisyrinchium bermudianum* has any common name or not, but it grows in every part of Georgia, and very abundantly in some places. It has no deleterious properties, and, for the purpose for which I recommend it, I believe it has no superior in the materia medica. It is the most reliable cathartic I have ever used. And while entirely reliable, it is one of the mildest and gentlest purgatives that I know. I have used it successfully in cases which have resisted calomel, oil, and epsom salt, given one after the other. The operation which it produces is not colliquative, nor attended with straining, but is much like a natural operation when the bowels are somewhat loose. The mildness of its effects and its thorough reliability, give it a high place in my estimation. A moderate handfull of leaves put into a cup, and the cup then filled with boiling water, prepares the tea for use on cooling. The cupful should be taken as the dose. It is an additional recommendation that the infusion thus prepared, may be sweetened, if desired, with sugar, to the taste, especially for children.

The next plant I shall notice is *saururus cernuus*, known to some as the swamp lily. It also bears the name of lizzard tail. I do not think it is found common in Georgia much above the pine belt which crosses the State from Columbus to Augusta, although I have seen it in Polk county. Its natural habitat is the low, marshy lands of the lower portion of the State.

The saururus has a root possessing the characters somewhat of a sub-aerial creeper, being nodular, and giving off rootlets at each node or joint. Pulpified and made into a poultice, or prepared as an ointment, it is a superior application to any kind of ulcer, sore or sprain. During the late war, an officer of the regiment to which I was attached, was thrown from a buggy, and falling with his whole weight upon one of his outstretched hands, sprained his wrist-joint so badly that he could not use it at all, on account of the pain produced by the least motion. He applied to me for something to relieve it. Having nothing on hand at all suitable, I resorted to this root. I had some gathered and a poultice made. It was applied in the afternoon (the accident occurred in the forenoon) and the next morning he could use the injured hand equally with the other and it gave no further trouble.

Some years since I was in the country a few miles south of Atlanta, and, in conversation about plants and their uses, I related the above circumstance, giving the botanic name of the plant, not then knowing any other. An old farmer present then stated that a little daughter of his had at one time injured her hip in some way, so that it produced a running sore, which discharged a teacupful of pus every day, and continued doing so for a long time. Everything else failing, he was induced to try a poultice made of the root of a plant which was abundant where he then lived, (about forty miles below his present home) and he stated that the sore was completely healed up in about one week, and has remained so. He added that he was so well pleased with its effects, that when he moved to his home he brought some of the seed with him, and planted them near his present dwelling. This case being so pointed and plain, I wished to see the plant, and went to where it was growing, when I recognized it as my own plant saururus. We had both been all the time talking of the same plant under different names. He called it swamp lilly, which name is a very pretty one, but not appropriate, as the plant is not a lily at all, and has very few characters in common with the lily class of plants. But there is no ground to quarrel with popular nomenclature, as, after all, it is probably almost as rational as that of the regular scientific botanist.

The genus of plants called *salvia*, derives its name from the Latin *salveo, to save, to heal*, and is represented in our gardens by the common sage. The name thus derived indicates that since the days of Linnæus, who bestowed the name upon it, it has been recognized as possessing healing virtues. There are *ten* species of salvia in the United States. The *salvia lyrata* is quite abundant in Middle Georgia, and extends to the coast. I have found it near Atlanta, but it is rare here, I think, and will scarcely be found above here.

The *salvia lyrata* is valuable in similar cases with the swamp lily, and in domestic practice has proven eminently useful and valuable as a poultice in carbuncle. The entire plant is used. It should be pulpified and applied so as to cover the entire carbuncle. This plant and the loblolly bay (*gordonia lasianthus*) would make an excellent combination in an ointment—to be made from the extracts. Or an extract from each, used either separately or in combination, rubbed up with lard or tallow, would make, I believe, one of our best applications to any form of solution-of-continuity of the soft tissues.

The loblolly bay is found in the coast counties of Georgia and Florida, but extends some little distance inland, along the banks of the rivers, especially when their margins are low and swampy.

SUPRA-PUBIC LITHOTOMY—A NEW OR UNUSUAL METHOD OF COMPLETING THE OPERATION, WITH A CASE.

By E. F. Starr, M.D., Nacoochee, Ga.

The history and literature of supra-pubic lithotomy indicate that comparatively little attention is bestowed upon this operation or method, while we know a vast amount of labor and inquiry have been given to other methods. To give relief from stone in the bladder has long been considered an important part of surgery, and since so much painstaking has been manifested to become possessed of the simplest, safest, best methods in most other surgical procedures, it seems a little singular that the high operation has not been more thoroughly investigated. But men are more or less like sheep—they follow their leader with a bound, whether wisely or unwisely, and many errors and misdirections have been perpetrated in this way. In the early days of lithotomy, operators failed to see and appreciate their opportunities for making this a safe sightly and speedily successful operation. Some brought zeal and skill to bear on the lateral method, led their followers in that direction, ridiculed, misconstrued and misapplied the other, and so we may suppose the supra-pubic came to be regarded as a dernier resort, and not adapted to general use It seems probable, too, that the disuse and neglect into which it fell, was, in a large measure, owing to the loose, open, unfinished and exposed manner in which the wound was left, thereby insuring a tedious recovery, if nothing worse.

"A large majority of the operations by this mode occurred at a period when surgery in all its branches was but imperfectly developed; when anæsthetics were unknown, and when there were few of the modern facilities for the cure of patients who have been subjected to so grave surgical injuries." (See article in American Journal of the Medical Sciences for July, 1875, by Dr. C. W. Dulles). And another remark by the same author serves further to illustrate how little thought has been given to it in the light of advanced medical knowledge. Dr. Dulles says, "The high operation is assigned a very low place in most works upon surgery, and is now so rarely practiced that there are comparatively few medical men who have ever seen it done; indeed, it has surprised me, in my investigations, to find how little is known of it by men of no inconsiderable eminence in the profession."

As Dr. Dulles has undertaken the history and defense of this operation, it is not my design to trespass upon his domain; but, while approving his labors, my object is to bring to notice a method of completing the operation by closing the wound, which, I think, will be found a great improvement upon the old way, and calculated to add much to the popularity of the operation.

In the American Journal of the Medical Sciences, for July, 1875, is an article by Dr. C. W. Dulles, of Philadelphia, entitled "Supra-pubic Lithotomy; an attempt to ascertain its merits and practicability as a general method, founded upon an analysis of 478 cases." Not long after the publication of this article, a case of stone in the bladder came into my hands, upon which I decided to practice the high operation. I did so for the following considerations: If results so favorable as this analysis shows, could follow such dernier resorts—that is, bad surgery and desperate cases—surely, quite satisfactory results might be expected from better surgery and more favorable cases; and that if the extraction of stone after the division of the important and complex tissues of the perineum, urethra, prostate gland and neck of the bladder may be done with reasonable success, a more complete success may be expected after the division of the simpler and less involved tissues of the walls of the lower abdomen, and of the front of the bladder, and that too, without the least possible risk (in the latter procedure) of producing impotency or incontinence of urine, which conditions may result from the lateral and bilateral operations.

Heretofore, it seems to have been the practice in supra-pubic lithotomy, to leave the wound in the abdomen, and sometimes even that in the bladder, *open*, to heal as best it might. And Dr. Dulles, in the article alluded to, recommends the bladder to be closed, but the outer wall to be left open yet stating that in the final process of healing, the bladder wall would become united to that of the abdomen. Now, if speedy and prompt healing and recovery is a desideratum after any wound, and if the bladder is to be united to the abdominal wall, then whatever course will most promote these ends is the best surgery.

With these views, I determined in the case in hand to close both wounds, and cause the adhesion of the two collectively by one process for all. By request, I reported this case to Dr. Dulles, and he published it, with remarks, in the July number of the *American Journal of the Medical Sciences* for 1877; but as there is an error in that publication in describing the sutures, which I wish to correct, I will reproduce the prominent parts of it, including the correction which I wish to make.

Case.—Mr. B. F. S., æt 35, a large, athletic man, had been an invalid for the last two or three years, but thought he had felt symptoms of stone for twelve years; for two or three years had been subject to occasional attacks of cystitis, setting in with shivering, and resulting in pyrexia and difficult micturition, which caused him a great deal of suffering; under treatment, he had for the last two months escaped these paroxysms and improved in general health, so that at the time of the operation he weighed two hundred pounds.

On the 6th of May, 1876, with the patient under chloroform, I proceeded to perform supra-pubic lithotomy. The patient was laid upon his back on a low couch, with his feet down and resting on the lower round of a chair, while I sat by his right side and made the first incision from above downward, and about four inches in length.

Some small arterial branches spouted a little blood, which was carefully sponged away, and before entering the pelvic cavity, further time was given for the general oozing to cease. After this, using the finger as a guide, the bladder wall was reached, the peritoneum being entirely avoided.

The feet were then elevated to the top of the couch, a sound introduced through the urethra, and the bladder raised up between the lips of the incision. The amount of fatty tissue enveloping the viscus made it somewhat difficult to denude, but a very clean dissection was not deemed indispensable, and when fairly cleared it was seized with a tenaculum, punctured just below with a sharp-pointed bistoury, and then incised to a sufficient extent with a Blizzard's knife upon a grooved director.

The bladder had been ordered to be emptied before the administration of the ænesthetic, but the kidneys being in a very active state from the previous free use of diuretic and demulcent drinks, and the time required to produce anæsthesia having been considerable, in addition to that consumed in making the incision, some urine had accumulated, and a part of it escaped through the external wounds, but as this was pretty well filled by the bladder as it was held up, the urine passed freely out.

The finger was then introduced, the stone found and brought out upon its palmar surface. It was smooth, of a flat, oval shape, and weighed one ounce and one drachm.

The thickness of the abdominal wall made the wound appear formidable, and its closure promise difficulty. This, however, was not so great as was anticipated.

At this point of the operation, I departed from the plan proposed in the *American Journal of Medical Science*, for July, 1875, and from former usage, and instead of closing the bladder alone by the lembert, or by the continued suture, I closed both the bladder and the parietes of the abdomen at once, by the interrupted suture, which was made to act somewhat as the lembert suture in relation to the bladder. That is to say, I passed a silver suture through the wall of the abdomen on one side, then made it to include a small portion of the coats of the bladder on the same side, then across the incision outside of the bladder, then into the coats of it again as before, on the opposite side, and thence through the abdominal wall, emerging at a point opposite to the point of entrance. When this suture was drawn, the wounds in both bladder and abdomen were closed, but the edges of the incised bladder were inclined inward or inverted, thus bringing the outer or serous surfaces in contact. In other words, the common interrupted suture was made to include all the tissues, but in relation to the bladder it was so inserted as to act as the lembert suture. The effects of this method of closure was to bring all the parts into close contact, prevent infiltration, promote speedy union, and secure quick recovery.

Drainage was instituted by keeping a small catheter in the urethra, and turning the outer end down into a cup between the legs, which was required to be removed and cleansed occasionally. At the expiration of ten days the cathetra was finally removed, and he got on his feet and passed his urine per urethram. At this time the remaining sutures were removed, except one, which was allowed to remain until the sixteenth day, (longer than necessary,) when it was taken away and the patient discharged, cured. During the whole time there was no inflammation nor swelling nor indication of burrowing or abscess about the wound, and it seems to me clear that this method of closing the wound is far preferable, both in point of time and safety, to that of leaving either one or both wounds open.

As to the merits of the high operation, as compared with other methods, it is my opinion that if ease, simplicity, safety and speedy recovery are to be regarded as substantial and available recommendations, then upon extended and impartial trial it must stand approved as equal, if not superior, to any or all other methods. But many are fond of old ways and old experiences, and are loth to quit the one or ignore the other; yet, if these influences and the love of show, parade and paraphernalia do not prevail to too great an extent, this operation is destined to emerge from its unmerited obscurity and take its position high among the useful procedures of surgery.

THE TREATMENT OF RETENTION OF URINE, WHEN CAUSED BY STRICTURE OF THE URETHRA.

BY JNO. THAD. JOHNSON, M.D., ATLANTA, GA.,
Professor of Anatomy and Lecturer on Venereal Diseases in the Atlanta Medical College.

(*Essay read before the Atlanta Academy of Medicine.*)

To treat retention of urine intelligently, it is essential that the nature of the obstacle be discovered. I shall speak here of that retention produced by stricture, because of its greater frequency, and especially because of the difficulty in relieving it, unless the proper instruments, and the requisite tact in their manipulation, are at the command of the physician. I do not say that any vast array of instruments is necessary. Most surgical operations may, under emergency, be performed with temporized devices. We rather admire the readiness and adaptability of the operator who, if necessary, finds a hand-saw, a pocket-knife, and pair of tweezers, sufficient for all amputations. But the urethra being a canal dark, deep, and narrow, some special appliances for relief of its obstructions are indispensable. An ordinary gum or silver catheter, the time-honored doctor's companion, will reach the bladder through a normal urethra; but, for passing through a tight stricture, it is about as efficient as a crow-bar. Very much to be pitied is that doctor who, armed with such a catheter, and far removed from better appliances or professional assistance, is called upon to remove a bladder-full of urine accumulated behind a tight stricture. He probably feels it incumbent on him to persist in his efforts at introduction; and these efforts may but serve to prolong the spasm or congestion that has occasioned the distress. I am not sure whether doctor or patient suffers the greater distress.

These attacks of retention occur with patients who have suffered for a greater or less time with a tight organic stricture, through which the urine could be forced only in a small stream. From some of many familiar exciting causes, the condition of spasm, or of congestion, or both, has been superadded, and what of the canal was heretofore pervious, is, for a time, obliterated. It is important that this mode of causation be recognized, as a knowledge of it will be serviceable in our treatment.

Most naturally, the first attempt for the relief of a patient suffering from retention, will be to withdraw the fluid *per urethram*. But it should be borne in mind that these attempts should be always of the gentlest character. Not only should the instrument be carefully handled, but it should be of the material and construction least liable to penetrate the mucous membrane of the urethra. Metal instruments of small calibre are dangerous, even in skillful hands. They are not only dangerous, but generally useless, for they do not offer the best hope of threading a narrow canal.

The small olive-pointed catheter or bougie, of French make, (though the English answers very well) with a slender and flexible neck, is comparatively safe and generally efficient. But unless the neck of the instrument be slender and flexible, it is but little better than the old-fashioned gum catheter.

Should the smallest size of the olive-pointed instrument prove unavailing, resort should be had to the filiform whalebone bougie. By gentle manipulation and rotation, one of these, very likely, will reach the bladder, and allowing it to remain for some little time, its withdrawal will probably be followed by the urine. Or, having introduced one, a second or even a third may be passed by the side of it. This may be accomplished more readily by pushing the first on until the *swell* or largest part is in the stricture, then withdrawing it until its neck or smallest part corresponds with the obstruction, and then insinuating the second by its side.

Now, while every physician is not expected to be provided with a formidable armamentarium, it will not be found expensive to have on hand such appliances as are enumerated above; or, if he is more liberally provided, a tunneled catheter may be introduced over the filiform. It is not always easy, though, to slide a tunneled instrument through a narrow canal over a bougie, (*guide*) for the catheter must necessarily be of considerable size.

A better plan, as I think, for following a filiform with a catheter, consists in using the gum filiform, tipped with a screw, for connecting to a corresponding screw in the end of a small silver catheter, on the principle of the staff of Maisonneuve's urethrotome. Some time since I had Mr. W. F. Ford, of New York, to construct such a catheter for me. Since then, I learned that such an instrument was already in use.

It is scarcely necessary to say that our patient should be placed in the best condition for relaxing what of spasm of the urethra may be present. The prolonged warm bath, the hot blanket, a sweat bath, opium freely given, and even anæsthesia, should be resorted to. Certainly diuretics should not be used, as I saw recommended some time since, for relieving retention. The bladder has already more water than it has use for. When these measures, I say, have been tried—when the instruments at hand have been judiciously used, but without avail, then resort should be had to other means of relief. To continue the punching at the stricture, and probably with an ill-adapted instrument, can do only harm. It would tend to keep up, even to increase, that spasm and congestion to which the sudden stoppage of urine is attributable. And if it is not possible to aspirate, or make other operation, it is much better practice to quiet your patient with opium *per orem* or hypodermically. This will relax the spasm and prevent, to a large degree, the further distension of the organ, by preventing the elimination of much water from the kidneys. Opium, in full doses, is better than *injudicious* attempts at catheterism. If, however, the retention has already lasted so long that the patient exhibits a tendency to coma, we should be extremely careful in the use of this remedy.

But it is not proper to allow the bladder to remain so greatly distended for many hours, with such possible dangerous consequences, and with so much suffering for the patient. We should resort to puncture. The trocar through the rectum or above the pubes, until a recent date, were the means of puncture at our command. The aspirator now serves its purpose more kindly, and being easily managed, and almost free from danger, there is less hesitation in resorting to it.

An operation which I believe better than puncture with a trocar over the pubes, or through the rectum, and one which might be executed in the absence of an aspirator, consists in plunging a bistoury through the perineum into the distended urethra, behind the stricture, and just in front of the prostate gland. This can be done, when the bladder is distended, without great difficulty, by the aid of the finger in the rectum. The propriety of extending the incision forward from this point to divide the stricture, constituting external perineal urethrotomy, will be presently discussed.

It is always proper for the surgeon, when called upon to relieve retention incident to a stricture, to consider if it is not better to make some operation which will cure the stricture as well as relieve the present distress of the bladder. Otherwise, in all likelihood, when the patient has been relieved, he will postpone measures for a cure, and thus remain in constant danger of a recurrence of his trouble, and of other evils whose approach is not less dangerous because more insidious. But we should consider, further, whether an operation would be more dangerous because of the condition of the patient, than it would be by waiting for some days or weeks for recovery from the prostration incident to retention.

If we have succeeded in introducing a filiform bougie, we might be tempted to follow it with a divulsor, and so open the stricture. This, I believe, would not be good practice. The shock from divulsion is greater than from any other method of operating. This is true of the measure, even when undertaken with a patient in good condition, and the danger is intensified from the suffering and depression in the case we now consider.

Then we are left to choose between internal and external urethrotomy. If we have succeeded in passing the guide to the bladder, we can follow it, very likely, with Maissonneuve's urethrotome, and so divide the stricture by internal urethrotthrotomy. To make the operation still more thorough—that is, to make *complete division* of the stricture bands—Otis' instrument should supplement the one already used.

For the above reasons, then, if we have decided to operate at once for the stricture, we may proceed as above directed, provided any operation from *within the urethra* be admissible. But I think it may be laid down as a rule, that patients suffering from prolonged retention do not bear operations within the canal so kindly as external urethrotomy. The more prostrated the patient, or the greater the disease of the bladder, so much the more, I believe, is "perineal section" to be preferred to division from within the urethra. It is not my object here, nor is it within the scope of this paper, to treat of the ease with which "perineal section with a guide" may be made, nor of the best methods of effecting "perineal section without a guide;" but I would urge the value of this operation when we have decided to relieve at a stroke both retention and its cause.

As above stated, internal urethrotomy is to be preferred to divulsion; but external urethrotomy (if the stricture be in the deep urethra) is to be preferred to the internal incision in those cases greatly prostrated by either the retention or other consequences of stricture.

[TRANSLATION.]

NICOTINIC AMAUROSIS.[*]

[BY M. CHARLES GUELLIOT.]

Translated from *Le Progres Medical* by A. SIBLEY CAMPBELL, M.D., Augusta, Ga.

It has long been known that those who work in tobacco manufactories are subject to conjunctivitis, and I have had the opportunity of observing this result at the clinic of my learned teacher in ophthalmology, Dr. Galezowski. But less generally known are the disorders of vision produced by the abuse of tobacco-smoking.

In 1847, Wright,[†] after administering to dogs from thirteen to thirty-two grammes of tobacco mixed in their food, observed that up to the time when a fatal effect was produced they were generally affected with blindness. It is the opinion of Lander, Mackensie and Wordworth,[‡] that atrophy of the optic papilla[||] is the characteristic lesion of the empoisonment by tobacco. But the majority of authors who have paid attention to this subject have given but little prominence to this lesion of the papilla, and almost all have confounded the nicotinic with the alcoholic amaurosis.

This is easily explained, for tobacco is rarely seen to produce disorders of vision so remarkable as to cause the patient to seek relief at the hands of a physician. Follin,[§] indeed, states that he has seen it in two positive cases only. It is this rarity of nicotinic amaurosis which has induced me to publish the results of my investigations.

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[*] Having seen the article of M. Guelliot, a short time ago, while looking over the numbers of *Le Progres Medical* for the present year, I have thought that a translation, in full, of his analytical and valuable discussion might be of some interest, as the abuse of tobacco in this country can be scarcely less, I think, than it is among the inhabitants of Paris and Ardennes.—TRANSLATOR.

[†] Annals of Hygiene, Vol. 38: Diseases Resulting from the Abuse of Tobacco; by Laycock and Wright. London.

[‡] Annals of Hygiene, Vol. 37, second series: On Some Toxic Ambliopiæ; by Dr. Reau.

[||] M. Guelliot here refers to the *colliculus seu papilla nervi optici*, described by Kœlliker as "the slight eminence formed by the optic nerve as it enters the eye, and visible on the inner surface of the retina."—TR.

[§] *Dictionnaire Encyclopedique.*

I happened to make my observations in a region where tobacco makes a certain number of victims, and I belive that the comparative frequency of nicotinic amaurosis in Ardennes should be attributed, in the first place, to the great consumption of tobacco there—which is the case, too, in all the departments of the Nord—and perhaps, also, to the Belgian tobacco, which, in a great many villages, has taken the place of the French tobacco. This last supposition agrees with that of Drs. Dickson and Reau,* who state that in Constantinople nicotinic amaurosis is less frequent than in other countries, and they believe that the explanation of this difference should be found in the quality of the tobacco of the East, as it is weaker than the French tobacco.

After having observed at Vouziers several examples of this disease—my attention being first called to it by a judicious and indefatigable observer, Dr. Vincent—I had the good fortune, in Paris, to meet with similar cases which I succeeded in detecting by interrogating all the patients who entered the hospital. I proceed now to report some of these observations, and after these I will give the notes of a case of alcoholic amaurosis, for the purpose of showing what should be, in my opinion, the points of differential diagnosis between the two diseases.

Observation I.—D., a glover, about fifty years of age, presented himself at the clinic of Dr. Galezowski for a conjunctivitis contracted some days before.. After the consultation, I took him aside and questioned him with a view to the possibility of tobacco intoxication, as I had been in the habit of doing with all the patients whom I had to examine. I then learned that this individual had an affection of which he had not at all complained.

Here are the evidences furnished me: This man smokes from morning till night (forty centimes'† worth of tobacco a day). The right eye is completely lost. When this eye began to fail, a year ago, the patient saw everything through a cloud; a little while after everything seemed yellow to him. The other eye was not impaired until afterwards. On this side the central acuteness is destroyed, while the peripheral sensibility is still normal. Besides the central scotoma,* the patient continually sees *muscæ volitantes*, and it also occurs to him, from time to time, to see objects covered over with a yellow tint, but he has never had any pain. Finally, he has never confounded colors, a point on which he gives a perfectly clear account, by reason of the nature of his vocation. In fact, I showed him one piece of ten francs and one piece of fifty centimes;† he distinguished them perfectly. He assures me that he sees less distinctly at night than during the day. I concluded the examination of my patient with the ophthalmoscope: the right papilla is atrophied, the left is certainly anæmic, whiter than in its normal condition. The ophthalmoscope did not reveal anything else.

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* Annals of Hygiene, Vol. 37, second series, loo. cit.

† A *centime* being the hundredth part of a franc or livre, and the franc equal to twenty sous, "forty centimes" would be equal to eight sous, or about eight cents of our currency. The quantity of tobacco implied in the text would, of course, depend very much upon the quality, and upon

Finally, on the right side (the side completely lost) the pupil is *contracted* and immovable. This patient, notwithstanding my advice, did not return to the clinic of Dr. Galezowski. I have, therefore, been unable to determine the effect of the treatment, which I prescribed for him—so simple, but, it is true, so difficult to follow—viz: to abstain entirely from smoking.

Observation II.—L., aged about sixty-two years, a clerk, entered the hospital Necker, (service of M. Guyon) for an ep-

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other circumstances also; the effect, too, would depend greatly upon the strength, which may vary within the different qualities; but in this country the quantity would perhaps approximate two ounces of fair smoking tobacco. In France the value is no doubt higher than it is here; but enough has been said to infer that the amount consumed was sufficient to produce serious derangement of the nervous system, for we at least know definitely that the patient smoked a pipe "from morning till night."—Tr.

* *Scotoma*, (from σκοτος) darkness, shadow, obscurity of vision; called also scotasma, scotosis, etc.—Tr.

†The ten franc piece is *gold*, and nearly equal in value to two dollars; the fifty centime, or half franc, piece is *silver*, and nearly equal to ten cents (or, to be more exact, $1.949 and 9.1 cents respectively); consequently, as we should suppose, the two coins approximate each other in size. Hence the propriety of using them as a color test.—Tr.

ithelioma of the rectum. This man was smoking one cigar and from thirty to forty centimes' worth of tobacco every day. After that visit, he informed me that besides the disease which brought him to the hospital, he had also to complain on account of his sight, as it had been considerably impaired for some time.

The *right* eye was attacked two months ago. From the beginning of that period, the patient has seen objects through a mist; he has central scotoma and muscæ volitantes. The mist is becoming thicker and thicker, and from time to time the patient sees objects in yellow (*en jaune*). The left eye was attacked five weeks after the right eye, which is very nearly lost at the present time. On both sides the pupils are *contracted* and immovable. Lastly, the patient *does not confound colors*—he distinguishes perfectly a piece of gold from a piece of silver, and he affirms that he sees no longer *after night arrives.* I will speak further on of the importance which I attach to these last two symptoms. I have not yet been able to make the ophthalmoscopic examination.

Observation III.—L., a jailer, smokes thirty centimes' worth of tobacco a day. One day he discovered that he saw everything through a mist. When he endeavored to distinguish anything through the cloud he saw muscæ volitantes pass before his eyes, and the object which he fixed appeared yellow to him. He has never had any confusion of colors, nor has he ever had any headache; this man saw better in the day than at night. At the present time the patient is kept in his bed by a carcinoma of the stomach. By order of his physician, he has abstained from smoking, and his sight is improving from day to day.

Observation IV.—M. X., a physician, to whom I made known my investigations, stated to me that for some time he had seen objects through a mist, that he was troubled with muscæ volitantes, that objects often appeared to him *yellow*, that he has never confounded colors, and that as soon as night arrives he sees less distinctly.

Observation V.—L., residing at Vaudy, (Ardennes) has been a soldier for two years, then a domestic. During all this time he committed numerous excesses. The right eye was first attacked in 1864; he was at that time a soldier in Africa. The vision of this side is completely destroyed; there is no sensation of light.* The ophthalmoscope shows me, in this eye, a complete atrophy of the papilla and atrophic spots on the choroid. The patient gives me a valuable indication: this eye has been lost in a very short time. The pupil is closely contracted and immovable.

The left eye was attacked one month after the other; the vision on that side is not entirely destroyed; the condition has been stationary for some time.

The ophthalmoscope reveals the same lesions here as in the other eye, but less decided; on this side the pupil is large and movable, and there is no injection of the conjunctiva. The patient has never suffered pain, and he denies altogether syphilitic antecedents. An important fact: he assures me that while he could still see clearly enough to guide himself, his vision was *much less distinct* at night than in the day, and he adds that he has never confounded colors. For a short time since, this individual has not had the means of buying tobacco, and he thinks his sight is a little improved. I advise him to give up his habit entirely—without, however, expecting a great improvement. This is a case of nicotinic amaurosis to an extreme degree.

Observation VI.—G., a grain merchant, entered the hospital of Vouziers for a chronic bronchitis. His sight, which, until recently, had been good, became impaired three months ago, both eyes being affected at the same time. There is some diplopia; never, or scarcely ever, any pain; and no lachrymation, unless he is exposed to strong sunlight. This patient *sees better* at night than during the day.

He received, several years ago, a kick from a horse in the left temporal region; the eye was affected for some time, but vision itself was not disordered. Though this patient sees through a mist, he does not complain of muscæ volitantes, but of a simple central scotoma. It has frequently happened to him to confound colors; he sees animals, principally rats, like all the victims of extreme alcoholism. The examination of the inte-

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*The term here used in the original ("*phosphenes*") implies specifically the subjective luminous rings, seen in the healthy eye, when the ball is slightly pressed with the finger, appearing on the side opposite the point of pressure.—Tr.

rior of the eye reveals an abnormal whiteness of the two papillæ, perhaps the beginning of atrophy. There is no doubt that I have here a case of alcoholic amaurosis. This man—who smoked, it is true—drank wine all through the day, brandy four times, and absinthe* once a day.

Since that time I have seen the patient again. His sight is but slightly improved, although at the hospital he is deprived of alcohol. I will speak further on of the importance which I attach to this slow progress of the phenomena in the alcoholic amaurosis.

Conclusions.—I will state, in the first place, that as Follin† recommends, I have taken care to inform myself as to the quantity of tobacco which each one of my patients smokes in a day. I will state, next, that all the individuals from whom I have taken these observations, smoke a pipe. I have not seen nicotinic amaurosis produced by tobacco in the form of snuff,‡ probably on account of the very slight absorption of the active principle, as has has been remarked in the thesis of Dr. Apostoli.||

If, now, I recapitulate the symptoms which my patients have furnished me, I find:

1. That the nicotinic amaurosis commences always in one

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* As this drink is not very common in this country, I add the following account of it: "Under this name a *liqueur* is much used in France, consisting of alcohol mixed with volatile oil of wormwood, and some other less active ingredients, especially oil of anise. It has for some time been noticed that the effects of this liqueur differ essentially from those of pure alcoholic drinks, constituting a series of symptoms which have been designated by the name of *absinthism*. * * * From the fatal effects produced by the oil of wormwood, it is highly probable that absinthe is capable of producing immediate fatal convulsions, in quantities in which ordinary spirituous drinks containing a similar amount of alcohol, might be taken with present impunity." (See United States Dispensatory—note to thirteenth edition.)—Tr.

†Dictionnaire Encyclopedique.

‡The author does not allude to the effects of tobacco *chewing*, as it is not very fashionable in France, though so common here. It is par excellence the American habit, and in this connection has been most humorously satirized by Charles Dickens, among what he regards as our social obliquities, in his "American Notes."—Tr.

||Apostoli—These de Paris, 1872.

eye, and is never bilateral at the first onset, as Hutchinson seems to admit, in the *Lancet* of November 7th, 1863.

2. That the right eye is affected first, although Hutchinson and Apostoli think the contrary.

3. That at the beginning, the patient sees through a mist, which becomes more and more dense.

4. That at the same time with the mist, there exists also a central scotoma—the scotoma being admitted by Apostoli and Wecker,* but not by Follin.

5. That as Wecker says, there is at first a diminution of the central acuteness, while the peripheral sensibility in the beginning remains normal.

6. That I have never met with the pains noticed by Apostoli, nor the cephalalgia of which Follin speaks.

7. That after the appearance of the mist the patients, from time to time, see objects in yellow (*en jaune,*) as Wecker alone has remarked.

8. That there is never any confusion of colors, notwithstanding the views of the majority of authors.

9. That the patients always see less distinctly at night.

10. That the pupils are almost always contracted and immovable.

11. That this disease, when it progresses with sufficient rapidity, may terminate in atrophy of the papilla, as Hutchinson has seen once out of three cases. [*Lancet*, August, 1863.]

In fine, it seems to me that the nicotinic amaurosis and the alcoholic amaurosis may be distinguished from each other, as follows:

1. Because the alcoholic amaurosis begins, primarily, in both eyes, while the nicotinic amaurosis always begins unilaterally.

2. Though the central scotoma exists in both the diseases, the muscæ volitantes are seen in the nicotinic intoxication only.

3. The confusion of colors which is present in the alcoholic amaurosis, *never* shows itself in the nicotinic.

4. Though pain may be present in alcoholic amaurosis, it is not present in that which results from tobacco intoxication.

5. While the victim of alcoholism sees better at night, the

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*Wecker—Traite des Maladies des Yeux.

individual afflicted with nicotinic amaurosis sees pretty well during the day, and is no longer able to see when the day has closed.

6. Though both diseases may terminate in atrophy of the papilla, yet the nicotinic amaurosis progresses much more rapidly.

In conclusion, I will state that I have desired to call particular attention to two symptoms of nicotinic amaurosis, which have not been pointed out until now:

1st. The patients see less distinctly at night than during the day.

2d. They never confound colors.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

J. S. TODD, M.D., Reporter.

ATLANTA, GA., November 13, 1877.

Dr. V. H. Taliaferro, President, in the chair.

Dr. Calhoun called attention to a case of epithelial cancer of the lids of the right eye, which was unusual, as that it had existed for thirty-eight years, the patient now being 67, stout and healthy, the mother of six or eight healthy children, none of whom exhibit any marks of the cancerous cachexia. For thirty-six years the cancer was dormant, though perceptible at the inner canthus of the right eye. Two years since it began to grow, but even twelve months ago it was not larger than a finger-nail, at which time he first saw her. It has gradually extended to the margin of the upper lid, along which it encroached, taking in some of the mucous membrane for a line and a half, and there were evidences of implication of the lachrymal bone. The operation, eight days ago, for its excision, was done under ether, of which she took two pints, the largest quantity he had given to any patient at one time. A cut was made from the bridge of the nose to half-way between the canthi. Found it adherent to the periosteum of the lachrymal bone, and shreds which he took to be cancerous dipping behind the globe of the eye. The cavity left after extirpation was large enough to contain his thumbs, leaving quite a deformity. This was rectified by a plastic operation. The patient being old, there was an abundance of loose skin, which permitted that the cut edge of the lid be drawn to the nose and there attached. The wound healed by the first intention, and all is now doing well—no fever or pain in the parts.

Dr. Baird reported an exceedingly interesting cure by arsenic of a facial neuralgia, that had existed for fifteen years. The subject was a gentleman æt. 35, who first caught malaria in Florida, and suffered from its effects during the war, while confined in a federal prison. His general health was shattered, his hopes gone. He had consulted many practitioners, and taken the usual amount of patent nostrums. The infra and supra-orbital and maxillary branches of the fifth pair of nerves were all affected. The pain was constant, at times, owing to spasmodic contractions, almost unsupportable. The patient found of late the greatest benefit from a series of successive small blisters, with which his face and head were dotted; on these blistered surfaces he sprinkled morphia. Dr. B., with many misgivings, commenced the treatment by using galvanism daily, which gave much immediate relief—resting the face, as the patient expressed it. He was also given, for a time, ten grains quinia daily, but this was soon discontinued. Fowler's solution of arsenic, in doses of four drops ter die, increased daily a drop until its physiological effects were produced—which generally happened in twenty days—was the main feature in the cure, which occurred in about two months. When arsenic caused puffiness, etc., it was discontinued for a few days, but pushed again and again, until success was procured. Six months have now elapsed, and there has been no return of the pain. Is of the opinion that neuralgia is frequently caused by malaria, and that arsenic will cure where quinine fails, even when given in full doses, say 30 or 40 grains ter die. He attempted to use the Fowler's solution hypodermically, but saw that abscess would result if persisted in.

Dr. Taliaferro was very much impressed with the effects of pressure on the uterus, by means of a tampon per vaginam, in relieving hypertrophic elongations of the neck of the womb, in cases of sub-involution. The facility with which pressure could be procured in this way, only needed a little thought and a study of the anatomy of the parts. Fill the vagina firmly, but not tightly or painfully, to the pubic bones, with sheep's wool soaked in glycerine, and on the female assuming the erect posture the superimposed contents of the pelvis press the womb steadily down, which, by causing fatty degeneration, results in absorption. In a recent case of elongation of the hypertrophied cervix, which he had determined to amputate, as a preparation for the latter procedure he filled the vagina with wool, and upon removing it, some time afterwards, saw so much improvement that the treatment was continued, and has resulted in reducing the cavity, in two weeks time, from six to three and a half inches in depth, and has, of course, obviated the section. He generally allows the packing to remain three days, but has left them for a week without detriment. The patient should always be placed in the knee and elbow position, this causing the vagina, when air is let in, to swell out as a balloon. Glycerine being detergent, should be preferably used to lubricate the wool—sheep's wool being preferable to the cotton on account of its elasticity, which prevents it from clogging together and becoming hard.

ATLANTA, GA., November 20, 1877.

Dr. J. S. Todd, esssayist for the month, read an interesting paper on belladonna.

Dr. J. G. Westmoreland desired to corroborate Dr. Todd's report of its effects in the relief of neuralgia. A case was presented for treatment several years ago, in the person of a lady about 22 years old, the subject of neuralgia of the scalp, which was not even temporarily relieved by full doses of opium. Quinine, also, failed to moderate the daily paroxysms. Belladonna was resorted to, and given in the dose of ten to fifteen drops of the tincture every five or six hours, so as to keep the pupils pretty fairly dilated. In thirty-six hours the pain entirely disappeared. Altogether, the action of the remedy was not kept up more than forty-eight hours, and complete relief was experienced for several years afterward.

Dr. J. M. Johnson said he had been accustomed to give belladonna in habitual constipation, along with strychnine and calomel, in the dose of a quarter of a grain of the extract to half a grain of calomel and the sixtieth of a grain of strychnine. He had also been in the habit of using belladonna for incontinence of urine, with success. With reference to its use in pulmonary phthisis, alluded to in the very able paper of Dr. Todd, just read, he could not, from experience, give any opinion; but from the opinion of its physiological action, given by Dr. Williams, of England, and the pathology of tuberculosis, as given by the same author, it would seem to afford a rational plan of treatment for that disease. He also alluded to a case of atresia of the cervix uteri, with painful menstruation, in which half a grain of the extract of belladonna was given three times a day for two days, with complete relief, but not without some unpleasant symptoms, temporarily, on account of the large dose used.

Dr. Taliaferro referred, approvingly, to that portion of Dr. Todd's essay condemning the prevailing mania for new remedies, in place of investigating and understanding more perfectly the physiological action and therapeutic effects of old and familiar remedies. He was in favor of enquiring more particularly into the manner of action by which the various beneficial results were had. He had some idea of the peculiar impression made on the capillaries by belladonna, from which some of the therapeutic effects, alluded to in the essay, may result.

Dr. J. G. Westmoreland agreed with Dr. Taliaferro as to the importance of studying more closely the direct or physiological action of remedies, in order to their rational use, and thought the able and interesting paper of Dr. Todd would be more perfect by considering belladonna in this respect.

Dr. Todd mentioned a case of delivery, recently attended, in which post partem hemorrhage proved troublesome, and which was arrested by the introduction of the hand into the uterus, the use of ergot, cold water and ice. He desired the opinion of members as to the probability of further difficulty in the case from the hemorrhage which occurred, or the treatment instituted for its relief.

Dr. J. M. Johnson, in reply, expressed the opinion that the manipulation necessary to arrest violent hemorrhage, probably leaves the womb more subject to inflammation, etc., but that such consequences do not generally follow. He mentioned a case in which great difficulty was found in arresting the flow of blood—no unpleasant effects resulting from the rough manipulation found necessary.

Dr. J. G. Westmoreland thought no serious consequences need be apprehended, necessarily, from the accident, nor the means instituted for its arrest.

Dr. Taliaferro thought that while metritis and other difficulty delaying the recovery may be more likely to occur, yet that he should feel no fear in this case.

Dr. J. M. Johnson reported two cases of impotence, treated during last summer, with Squibb's fluid extract of ergot. One, the subject of malarial poison, had been impotent for twelve months, probably on account of general depraved condition of the system, from the unhealthy locality in which he lived. One teaspoonful of the fluid extract, three times a day for a week, restored virility perfectly. The other case had symptoms indicating irritation of the medulla oblongata, for which he had been treated unsuccessfully by counter-irritants, etc. This case was treated in the same manner as the first mentioned, and in three days was restored to normal activity of the procreative organs.

Dr. Baird thought it unreasonable to suppose that ergot is a panacea for all cases of impotence, since the condition is not always the result of the same cause. When it depends upon congestion of the spinal cord, he could very well understand why ergot would be useful; for the action of this remedy upon the cord tends to relieve this condition. Impotence is sometimes the result of urethral stricture, and other causes, which ergot cannot possibly relieve, and, therefore, cannot be given in all cases of impotence with any prospect of success.

ATLANTA, GA., November 26, 1877.

Academy met, Dr. V. H. Taliaferro, President, in the chair.

Dr. Todd, referring to the case of post partem hemorrhage, reported at the last meeting, remarked that no further difficulty had been met with in the case since the hemorrhage was arrested.

Dr. Taliaferro reported a case of pelvic peritonitis in a lady, recently the subject of opium habit. She had advanced so far in the use of opium that fifteen grains of morphine were used daily, when the cure was commenced by gradual reduction. One month since, the habit was entirely suspended, after having been under treatment for about three months. About three days ago she was attacked with inflammation of the pelvic viscera, as above stated, from which she suffered constant excrutiating pain, rendering her unable to sleep or rest in any manner. Knowing the short time that had elapsed since she had been relieved from the habit of taking a large quantity of opium, he supposed that more than the ordinary quantity would be required to give her ease, and commenced with the dose of half a grain of morphine. This giving no relief from the suffering, the dose was increased to one grain every hour, and finally to two grains, hyperdomically, every two hours, with like failure. Frequent discharges from the bowels coming on, the preparation and mode of administration were changed to laudanum, in the dose of half a teaspoonful by the stomach, and a fluidrachm by the rectum. No relief being afforded, the black drop was then used, in the dose of two fluidrachms every two hours, which in a few hours was followed by perfect relief from pain. He also called attention to a novel remedy for indigestion, which he had met with in domestic practice. In conversation with an intelligent lady patient who had been absent from the city, and had been a slight sufferer from indigestion, he learned that relief had been afforded by sand obtained through a friend from a spring in the neighborhood. The conclusion arrived at, therefore, was that sharp sand obtained anywhere, is equally effectual. Obtaining a specimen of the sand from his informant, Dr. T. tested its effects upon himself and others laboring under symptoms of indigestion, with rather promising results; and finding nothing different from other sharp, clean sand, does not think it necessary to obtain the article from any particular source. He uses it in the dose of one-third to half a teaspoonful, and called upon Dr. Simpson for the report of the effects of that given him in a state of embarrassed digestion.

Dr. Simpson reported rather negatively, saying he had only taken one dose, and although the symptoms disappeared not long afterwards, he could not certainly determine what agency the sand exercised.

Dr. J. G. Westmoreland thought it not unreasonable that sand should exert mechanical influence upon the surface of the stomach, such as is had by coarsely pulverized charcoal, bran, alone or in bread made of unbolted flour. These rough substances have for a long time been recognized by the profession as suitable means to promote digestion in sluggish condition of the stomach. The explanation is that the mucous surface is titilated, and thereby excited. This being communicated to the whole organ, peristaltic contraction is increased, and perhaps the secretion of gastric fluid is promoted. It is reasonable to suppose that sand will act more certainly and powerfully in producing these effects upon the stomach through mechanical process than bran. It must be remembered, however, that indigestion is the result of very different, and even opposite conditions of the stomach. Instead of torpor, we often meet with excessive excitement, amounting to an inflammatory condition of the mucous surface, as the cause of indigestion. In such condition bran, sand, charcoal, or any other exciting agent, will not only fail to be useful, but must necessarily prove injurious.

Dr. Calhoun reported a case of cystic tumor at the corneo-sclerotic junction, coming on in connection with pterygium. It had been growing about twelve months and had attained the size of the little finger's end. He operated by grasping the tumor with forceps, and shaving it out, with the existing pterygium, leaving a depression in the cornea, where the base and larger part of the tumor was situated. Such tumors are rare, as in the great number of diseased eyes which he has seen, he had never met with more than two before.

He also referred to a case reported some year or two since, in which he extirpated a tumor, without removing the ball, taking its origin on the periosteum, around the optic foramin. It was thought most likely to be malignant, and had practically destroyed the vision of the eye involved. He recalled the case now, to say that a letter received from the subject recently, informs him that there has been no return of the growth, and that the ball and lid are almost natural, and the sight is nearly as perfect as in the other eye.

Adjourned.

Selections.

The Plaster of Paris Jacket in Spinal Diseases.—The repeated inquiries made by physicians respecting the use of plaster of Paris in constructing supporters for spinal disease, show a widely diffused interest in the subject. I have therefore prepared this article to answer the numerous questions addressed me from different sources.

The therapeutic principles involved in the use of the plaster of Paris jacket, are the same as for other spinal supporters, and may be stated as follows:

1. Pott's disease is an inflammation limited almost invariably to the bodies of the vertebræ, and not affecting the articular processes behind them.

2. Hence it is that the bodies only soften and yield to the compression of the vertebræ above, while the articular processes behind remain firm and unchanged, in consequence of which the spine bends at an angle or a short curve, with its concavity forward and its convexity backward.

3. Curative apparatus acts in three methods, viz: (*a*) as a splint to correct or arrest the deformity; (*b*) as a means of securing immobility; (*c*) as a lifting power to take off the weight resting on the diseased vertebræ.

Any firm, broad splint applied to the back may act favorably to prevent the further flexion, and to secure immobility. The action of the plaster of Paris jacket in this respect, like that of all other supporters, is too obvious to require explanation. There is, however, one curative element in the splint principle which is very generally overlooked. Inflammation of the vertebral bodies is usually kept up solely by mechanical irritation; that is to say, by the jarring, the rocking and the pressure of the vertebræ above pressed down by the entire weight of the superior portion of the body. If this mechanical irritation be taken off, almost all cases will recover from the inflammation spontaneously. Now let it be borne in mind that the articular processes are free from inflammation, and are located on a line considerably posterior to the bodies of the vertebræ.

It is evident at a glance, therefore, that if any supporter is so constructed that by its splint power it shall flex the spine firmly backwards, it will throw the weight of the vertebræ upon the articular processes, and take it off from the inflamed bodies of the affected bones.

The direct lifting power of spinal supporters is often overestimated. In small children it amounts to almost nothing, because their hips are smaller than their waists, and there is no basis on which to rest a support for the lifting power. In adults, however, and especially in women, the expansion of the hips gives a counter support, and lifting becomes possible. It may be well to remark, just here, that the old attempt to lift by pressure in the axillæ is abandoned by all good surgeons. A lifting force applied there with sufficient vigor to accomplish anything, soon paralyzes the arms. In spite of this fact, however, the instrument sellers continue to vend, and physicians to buy, absurd pieces of apparatus, even for young children with no expansion of the hips, pretending to lift by crutch pieces in the axillæ.

The only lifting power possible (except an occasional headstretch) is by embracing the double cone of the waist in something resembling a corset, and this the plaster of Paris jacket accomplishes in cases of adults. The principle is simply this: The waist being the smallest part of the body, anything like a firm, well fitted corset, or the plaster jacket firmly laced on, tends strongly to crowd the cone of the hips downward, and the inverted cone of the rest of the body upward, thus making a decided extension on the middle of the spinal column. It is for this reason that firm corsets, well laced, are a comfort, and actually a benefit to women with incipient Pott's disease. The plaster of Paris jecket acts both as a corset and as a splint, thus fulfilling both indications, acting in that respect like the combination brace, which I have been for years in the habit of applying to cases of Pott's disease.

The most approved method of applying the plaster jacket, requires the following articles to be prepared:

1. A pair of pulleys to suspend the patient.

2. A suspension bar, or rather a sort of whippletree of steel or strong wood, suspended by the pulleys in the centre, and having two notches or hooks on each side, one five inches and one eight inches from the centre.

3. A sort of band or collar of soft stuffed leather to surround the base of the skull, capping the end of the chin in front and passing beneath the occiput behind. Straps pass up from this on each side to the suspension bar.

4. A pair of axillary pads or bands suspended from the centre notches of the suspension-bar.

5. A quantity of roller bandages of coarse cross-barred crinoline, whose meshes are rubbed full of good, dry, fresh plaster of Paris.

The patient is now slung up by the arm-pits so as to hang from the suspension-bar on the axillary bands. To give the spine itself a special extension, the head-sling is also applied and buckled up so as to sustain part of the weight of the body. The axillary bands should be connected together by cross straps, so that by no accident can the child slip down out of them, leaving the whole weight to come on the neck.

A common knit shirt should be on the patient's body, and the plaster of Paris bandages should have already been placed in warm water to soak. It is also well to place a strip of cotton wadding along the more prominent portion of the spine, to prevent pressure on subcutaneous points of bone.

Now, commencing as low down as can be done without impeding the flexion of the thighs, the bandages should be applied over the whole trunk as high as the axillæ, in several successive layers. Sometimes it is well to enclose in them a number of perpendicular strips of perforated tin to obtain additional strength. When the plaster sets, the whole will become one rigid stone jacket, holding the patient firmly in position. Strange to say, this petrified envelope does not genrally embarrass the breathing, though I have seen one or two exceptions to the rule. Before applying the bandages, a compress of cotton batting is applied to the lower half of the abdomen, beneath the shirt. After the plaster is hardened, the compress is removed, thus furnishing space for abdominal respiratory movements.

The apparatus can be applied in less elaborate fashion if desired. Thus, instead of suspending the patient by pulleys, three assistants can hold him horizontally face downwards by the thighs, arms and head. In this position the weight of the body causes it to settle down in the centre, thus flexing the spine backward in a desirable manner. It is not absolutely necessary to use cross-barred crinoline, as any thin, loose fabric will do. I have also seen very effective jackets applied by coating three layers of cotton flannel with wet plaster, wrapping them around the body, and confining them with an ordinary roller bandage. The patient is held meantime in a suitable position until the plaster sets.

Cases of lateral curvature can be treated by this apparatus with considerable efficiency, but its main use is for Pott's disease.

In answer to the often-repeated question, what estimate should we put upon the usefulness of the plaster jacket, I would say as follows:

Like all other useful things, it has its advantages and disadvantages. The advantages are as follows:

Cheapness. It costs next to nothing for material, though it consumes considerable time on the part of the surgeon. The cheapness enables one to apply it to numerous cases where poverty prevents the parties from paying $25 to $40 for a regular supporter.

2. Ease of construction. Any well educated physician can apply it himself however remote he may be from instrument makers. This is a very material advantage, for in order to reach an instrument maker, many patients are obliged to travel hundreds of miles, because the attempt to construct an efficient spinal apparatus from measurements sent by mail without the personal presence of the patient, is almost always a miserable failure, and the expense of the trip is often greater by far than that of the apparatus.

3. Perfection of the fitting. The plaster being applied wet, molds itself perfectly to the form, so that a "good fit" is easily obtained.

4. Efficiency. Where the deformity is situated in the lumbar or lower dorsal region, the plaster jacket has a control over it fully equal to that of any appliance ever used.

The disadvantages are as follows:

1. The jacket cannot be often changed without involving an expense for the surgeon's labor, which would soon be far greater than that of a good supporter. Hence, while wearing it, the patient is deprived of the use of his baths, somewhat to

the detriment of his health. Sweat, however, does not accumulate, owing to the absorbent power of the plaster, but considerable decomposing cuticular matter accretes on the skin which cannot be removed. To a certain extent the advantages of easy removal can be obtained by foregoing those which result from carrying the plaster entirely around the body. A carapace, or "turtle shell," as Sayre calls it, may be made by putting several thicknesses of cotton flannel and plaster, strengthened by strips of perforated tin, upon the posterior half of the body and binding it on by a roller bandage. When this has hardened it can be enveloped in a jacket of cloth fitted to the body and made to lace up in front, and can be removed for bathing purposes as often as desired. The plaster portion of the apparatus not being strengthened by continuity in front, must be made pretty thick and strong, but it often serves a very good purpose. This form of the jacket has merits, but yet it has fallen, for the most part, into disuse.

2. The plaster jacket, in its original form, is only applicable to deformities existing below the level of the border of the axilla. On Pott's disease above that level it has but little effect, as the jacket cannot effectively be carried any higher. However, by the help of a mechanic, steel splints like those of a regular spinal supporter can be imbedded in the plaster and carried up high enough to apply shoulder straps, or even a head-stretch, but this is not much easier nor very much cheaper in the long run, than a regular brace.

3. The plan of suspending part of the weight of the patient by the head, involves a danger if the surgeon is at all careless. All joints of the body are liable to congenital or acquired laxity of ligaments, and the upper cervical articulations are no exception. If the surgeon chanced to have one of these relaxed cases in his suspension-sling, and by any inadvertence of himself or of his assistants, should bring too strong a tension in the head-straps, the horrible accident of a dislocation of the neck might easily occur. Great care should be taken to guard against this possibility.

From these considerations it is evident that the plaster of Paris jacket is a very valuable appliance in numerous cases, and has the especial merit of being an extempore apparatus which can be applied however remote the patient may be from instrument makers, and however impoverished he may be in purse. It has, however, some special disadvantages, and at its best, is no way superior to a well-fitted combination brace, containing the corset and the splint in one instrument. Indeed the superior convenience and tidiness of the combination brace will always cause it to be preferred by a large number of surgeons and patients.—*Edward Andrews, M.D., in Chicago Medical Journal and Examiner.*

Editorial.

The numerous medical publications in every portion of the civilized world, afford the means of communicating and receiving items tending to advancement in, and perfection of, the science of medicine. Were all the newly-discovered facts thrown into this vast chain of media, certainly more rapid strides toward perfection in the healing art would be the result. Unfortunately, however, the most devoted, unselfish votaries of science content themselves with making such discoveries practically useful, only to those with whom they are immediately associated.

Notwithstanding this failure, much of the material calculated to promote advancement in medicine, finds its way into these channels, and real progress is certainly being had. There is no lack of compilers to bring the scattered fund from periodicals and other sources, into the more permanent repository of text-books; but the faithfulness of some is rather questionable. It is easier to dress up in a fascinating style, old and exploded ideas, gathered from standard works, than to collect and arrange correct principles from less tangible sources. Hence, some of the new works show no very decided advancement on the subjects of which they treat. Moreover, the books are made to sell—at any rate, this is one of the objects of their manufacture—and decided innovations upon long-taught and cherished principles are likely to interfere with the desired pecuniary returns.

For a few months past, our engagements with other matters have prevented reviews and notices of new publications to the extent desirable. Quite a number of excellent monographs have been received during the year, many of which are worthy of extended notice. This form of communication with the medical public, on special subjects, is interesting and profitable.

Some of the valuable books sent us from the publishing houses of New York, Philadelphia and other places, have received only a mere notice, but so soon as opportunity is afforded, we propose yet to speak more at length of their merits. We shall not hesitate to mention, also, what of defects we may believe they possess. As a journalist, we cannot consent to laud error and be the means of encouraging, unjustly, the sale of books that will not, in our opinion, benefit the profession and the public.

BIBLIOGRAPHICAL.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. Von Ziemssen, Professor of Clinical Medicine, Munich, Bavaria.

The twelfth volume of this immense work, edited by Albert H. Buck, M.D., from the publishers, Wm. Wood & Co., New York, was received at this office two months since. In the November number of our JOURNAL its reception was acknowledged, and mention was made of the authors furnishing the matter it contains. We did no more from press of time, nor did any thing further strike us as important to say of a work so lavishly praised already by journalists and the profession generally. Besides, German medical literature while it leads us to great perfection in some departments of the healing art, is, as this work clearly demonstrates, sadly deficient in others. Exhaustive discussion on pathology and etiology, particularly the former, is had in the volume before us, connected with the diseases of which it treats. The national tendencies in Paris, London, Edinburgh and Dublin are to the study of medical and surgical therapeutics, while Berlin, Munich, Heidelberg and Leipsic are devoted to pathological investigations. The scalpel and microscope are to the Germans what the ecraseur and alkaloids are to the French and English. It is playfully said that the German would like to see his patient die, that he might examine the diseased structures.

Dr. Zeimssen's authors certainly exhibit the national proclivity in their very thorough pathological research. For example, in the chapter on inflammations of the dura-mater, fifty pages are devoted to pathology, &c., and only two to the treatment.

To Americans, whose education in pathology is, too often, sadly deficient, this German work is, doubtless, acceptable. It should be peculiarly so to such as have been all their lives in hot haste to drench their patients with every obtainable drug, without definite knowledge of the pathological state, or the physiological actions of remedies.

For a complete library on the practice of medicine, however, we prefer more of remedies and their action, than is found in Ziemssen's Encyclopædia.

A notable instance of the opposite extremes, to which German and American writers are subject, is found in the above work and that of the following:

"MODERN MEDICAL THERAPEUTICS" and "MODERN SURGICAL THERAPEUTICS." By George H. Napheys, A.M., M.D., etc. From the publishing house of D. G. Brinton, Philadelphia, 1877. For each work, price, post-paid, in Cloth, $4.00; Leather, $5.00.

In these two volumes of 580 pages each, pathology, etiology and diagnosis, as well as the action of remedies, are absolutely ignored, and diseases by name are associated with the name of remedies singly, and in the form of formula for combinations. The two volumes are, therefore, formularies of medicine and surgery.

A vaulable library might be made of Zeimssen's Practice of Medicine, Napheys' Modern Medical and Surgical Therapeutics, with the addition of some reliable work on the action of remedies, but the empirical and routine manner of prescribing for disease, to which formularies inevitably lead the practioner, is the most serious hindrance to the progress of rational medicine. Students, beginners and old practitioners, eager to arrive at the ultimate object of all medical investigations, are too often inclined to sooth their consciences into the acceptance of the indolent habit of emperical prescriptions.

Cod liver oil for phthisis, quinine for malarial fever, mercury for dysentery, etc., etc., may be learned by rote, as the school boy learns his selection for declamation, or with formulary under arm, as did the Thompsonian steam doctor, in the days of my boyhood, they may go forth, but complications, varied stages and errors of diagnosis, render such practitioners not only useless, but dangerous to human life.

EDITORIAL CORRESPONDENCE.

FULTON, ARKANSAS, December 7, 1877.

Editor Atlanta Medical and Surgical Journal:

I have just examined a case, which, from its interesting, and, to me, peculiar character, I deem worthy of publication. To many it will, no doubt, prove interesting as to me, and may, too, be in a manner profitable. The disease being located in the tongue—an organ whose functions serve so many important purposes, varied, however, in different individuals, and the loss of which occasions so much inconvenience—it follows that he who can successfully deal with this, and *all* other affections to which it is subject, is entitled to gratitude and reward.

The subject, a boy six years old, in every other respect perfectly healthy, has an erectile tumor of the tongue, of a nævus character. Various physicians have been consulted, and various plans of treatment adopted, such as ointments, bandages, etc., and all with the same unsuccessful result. The tumor is gradually growing larger, and is occasionally temporarily enlarged by local or constitutional disturbance, such as sudden change of temperature, irritants, etc. The general deformity about the mouth and throat, resulting from it, is very great. Besides the protrusion, which is considerable, the teeth and maxilla are decidedly abnormal, presenting a spectacle truly disgusting, were it not for the sympathy one is bound to feel for the little unfortunate. He may be truly said to have over a "mouthful" of the tumefied tongue, yet, strange to say, articulation is pretty fair, and mastication almost pefect. In connection with the general malformation of the tongue and mouth, abscesses of the submaxillary and sublingual glands exist. The throat just beneath the maxillary bones is very much swollen from the glandular disease, and resembles that of a very fat hog. The abscesses were once opened, and discharged a large quantity of pus, and at present fluctuation is very distinct.

After this rather imperfect description of the case, I proceed to give my opinion of its pathological character, mode of treatment, etc. I also desire your opinion on the subject. According to Erichsen, nævus of the tongue is rarely met with. He mentions a case similar to the one under consideration, as peculiar and novel. This is evidently of the variety of nævus called venous—its dark purple color being unlike artereal anastimosis, and its locality, as well as appearance, precluding the idea of its capillary nature. I conclude that the maxillary swelling depends on the enlarged protruding tongue producing tension and irritation of these parts resulting in inflammation and suppuration. In the treatment of venous nævus, four plans may be considered: 1st. To excite adhesive inflammation by seatons or stimulating injections. 2d. Excision by the knife. 3d. Removal by ligature. 4th. Removal by escharotics. On account of the danger of serious hemorrhage, I am inclined to favor the ligature, or that which acts on the same principle and is preferable—the ecraseur. The locality and size of the tumor render this plan more desirable. The line of demarkation between the redundant and normal tissue is very distinct.

I hope, but with misgivings, I confess, that success may crown my effort at relief, but will, at some future time, report the result of whatever treatment may be adopted.

R. W. Westmoreland, M.D.

EUROPEAN CORRESPONDENCE.

London, October 9, 1877.

Since listening to the very able address delivered by Prof. Robert before the British Medical Association at Manchester of which I sent you a resume, I have been engaged in some efforts to adapt one of the more recent discoveries in antisepticism which, up to the present time, have been confined to the physiological laboratory—to economic purposes.

It is now an established fact, that an organic body may be kept without change for an extended period of time in contact with air which has been filtered through cotton—provided none of the seeds (so to speak) of decomposition were present at the time the body was placed in the filtered atmosphere. This curious fact depends upon the power possessed by cotton of filtering all organic matters from the atmosphere passed through it, and hence permitting nothing but pure gases to come in contact with the body enclosed within its protecting envelope.

From this it will be understood that decomposition appears to be, to a certain degree, dependent upon seeds (scientifically called spores) floating in the atmosphere, which, coming in contact with organic bodies, under favorable conditions, set up the changes which we call putrefaction.

The next point to be understood is, that a heat far less than that required to scorch cotton, will destroy the vitality of these seeds; indeed, for all practical purposes, the heat of boiling water has so far proved effectual. Every housekeeper knows that boiled milk keeps longer than unboiled, and every cook can tell us that heating meat, or "setting it," notably retards decomposition. This, again, is the oft-told tale of practical experience leading the van of science, and is the principle which underlies the preservation of food by "canning" or by "bottling;" in other words, by hermetically sealing, in which the heat employed destroys the germs, and then the ingress of the atmosphere is prevented by mechanical means; but the appliances are expensive, and much care, and sometimes mechanical skill, are needed to insure success. The least carelessness results in certain failure, and hence food preservation by the process of hermetical sealing, can never become of daily use in the household, the kitchen, the apothecary's laboratory, or the invalid's chamber.

The process which I desire to bring to the attention of your readers and of the public, is simplicity itself. Every housewife can practice it successfully. It needs no special apparatus; it requires no particular mechanical dexterity, and yet it will preserve the most delicate foods untainted, and keep easily putrescible fluids sweet for any reasonable length of time.

Suppose it is desired to preserve a pint of milk. Put it into a sufficiently large vessel to allow room for boiling. The material or shape of the vessel is of no practical importance, so far as the principle of preservation is concerned, but a glass bottle will be found useful and convenient, as permitting the process to be observed. If a glass bottle is employed, it would be well to have it annealed by slowly heating it to the temperature of boiling water, and then permitting it gradually to cool. The milk having been put into such a bottle, the mouth is to be covered with a ball of cotton, which is to be tied securely round the neck, so that no air can enter except through the cotton, and thus prepared the bottle is to be put into the oven, or otherwise heated, until the fluid boils; the heat is then withdrawn and the process is finished.

Now as long as that cotton is not disturbed the milk will remain perfectly sweet, but if the cotton is once removed, the process must be repeated or the contents of the bottle will spoil. If, therefore, small quantities are required at frequent intervals, it will be found more convenient to have a number of vessels, and to put into each only so much as will be needed at one time. It is quite possible, however, if the vessel is provided with a stopcock to withdraw such small quantities of fluid at a time as may be desired—the vacuum in the vessel being supplied with air filtered through the cotton. In a similar way any other organic fluid may be preserved.

The convenience and value of this simple process are, in my opinion, very great. It will permit of soups, broths, etc., being kept from day to day, from week to week, nay, even from month to month, if desired, with little or no trouble or expense, as far as the process is concerned, but with a positive saving of food, which, in small families particularly, might otherwise spoil and be thrown away.

If it is desirable to prepare the vessel so as to admit of transportation, it is only necessary to put a cork loosely into the neck of the bottle before the cotton is put on, the whole is then heated, and when it has cooled the cork is forced into the neck of the bottle by pressure on the outside of the cotton.

Keeping in view the principle that everything coming in contact with the fluid must be purified by a heat of 212 degrees Fahrenheit, and that all air permitted to enter must be made to pass through cotton; the stopping of the vessel may be accomplished in a variety of ways; but the plan just proposed will suit for domestic purposes, but, as being the simplest, another method will however be mentioned when the use of the principle in its commercial application comes to be discussed.

The employment of any of the preserving jars or cans at present in use will be much facilitated by the adoption of this process, as by putting the cover loosely in place, and surrouding it with cotton, the vessel can be left to cool before the cover is fastened down, and so the pressure inside and outside the can or jar being equalized, the tendency to leakage will be reduced to a minimum, but it must be borne in mind that in fastening the cover, the safest and best way is to do so without disturbing the ball of cotton.

Every nurse knows the difficulty of dealing with infants' food. This simple process solves the problem. A few vials each to hold food enough for a meal, a little cotton and a hot oven or a saucepan of boiling water are the only utensils required, and then food sufficient for a week can be prepared with perfect certainty of being found perfectly sound at the end of that time.

Then for the sick-room, beef tea, broth, gruel, etc., can be prepared during the day, and be always ready at the moment required. What practitfoner will not recognize the immense convenience, if not value, of a simple process which will enable him with certainty, to have food ready for his patient at the very moment when the invalid's capricious fancy will admit of his taking nourishment which a few moments later he would reject, while by reducing to a minimum the immense waste by spoiling, it will so diminish the cost and trouble attending the preparation of the diet, as to allow of a greater variety of food and tempting luxuries being kept constantly on hand without any increase of expense. These reasons show how it will bring within the reach of the sick poor many luxuries which they are now unable to procure.

Here, also, it opens up a new field for the wealthy and philanthropic, who can thus at their leisure prepare various kinds of food and luxuries for the destitute sick, and, at convenient opportunities, send them wherever they may be needed.

Unless a more extended experience than I have had in the use of this process should develop difficulties which have not occurred to me, the application of this principle will prove of great advantage to the physician and to the apothecary. The former may prescribe infusions or decoctions, and the latter can keep them on hand, and supply them without being compelled to have recourse to the use of alcohol to preserve them, or to the questionable fluid extract, to furnish an unreliable substitute for them. Thus:

Into a tin can having a stopcock at the bottom put the materials required, close and cover the mouth of the can with cotton, as in the case of the milk already described, then let the whole be heated to boiling point, and preservation is complete. The contents may now be drawn off through the stopcock, at such intervals and in such quantities as required.

Next let me describe the plan I have adopted to preserve solids—such as pieces of meat—using, of course, the ordinary utensils to be found in every kitchen. Put the meat on a dish, put over it a clean towel to keep the cotton from the meat; pack raw cotton, evenly, all round on the edge of the dish; next put on a dish cover (in which there must be no holes) and see that there is cotton between the edge of the cover and the dish all round; next tie the cover down as tightly as possible, or else put on to the cover a good heavy weight; as a further precaution, put, if possible, more cotton round the outside of the joint between the cover and the dish; finally, heat the whole in the oven to 212 degrees Fahrenheit.

This method will also suit for fish, fowl, game, or any other sold food, and if smaller pieces are to be operated on, of course smaller vessels may be used, still remembering to cover with cotton, and then to heat to 212 degrees Fahrenheit.

If the object is to prepare cans, such as are commonly sold, the adaptation of this process will be found to be very simple. Having the can filled and the top soldered on, make a small hole in it to allow the escape of the air as it expands; into this hole loosely fit a peg of solder, cover the top with cotton, and screw it on in any convenient way; heat to 212 deg. F.; let the can cool, press the peg of solder tightly into the hole, remove the cotton, clip the peg close to the can, put over it a drop of solder, and the operation is complete. Other variations of the mechanical details have been tried but the one described seems to be the simplest.

This principle is also applicable to the evaporation of fluids, as in condensing milk and making extracts, because any solution of organic matter which has been boiled and not again exposed to unfiltered air, may be dried without decomposition by a current of air filtered through cotton; and the same thing is true with regard to the dessication of solids, animal as well as vegetable, at the ordinary temperature of the atmosphere. In many instances, the primary heating will prove almost an insurmountable objection, but it is quite possible that a rapid current of filtered air may dry the surface of the body so rapidly, and perhaps wash away the spores upon it, that decomposition would not set in before dessication would be completed. My experiments on this point are not sufficiently extended to warrant me in giving a decided opinion.

The use of cotton as a surgical dressing, is far from being a novelty in the South, although in the North and in Europe some surgeons claim no little credit for its introduction. It is quite possible that its abundance and convenience may have been the causes which influenced its employment, and that we, in common with the rest of the world were aware of the protective power it possessed. Be this as it may, its practical value was fully appreciated, as its frequent use in the treatment of burns, scalds, etc., will testify; still, it is worthy of a more careful, extended and scientific investigation. In combination with a spray of carbolic acid or some other suitable agent, it would, perhaps, prove to be a cheap and effectual substitute for more expensive and troublesome antiseptic dressings. It is quite possible that even the father of antiseptic surgery, Prof. Lister, might be induced to bring his large experimental experience to bear on its employment.

An interesting experiment which could be tried in some establishment where artificial ventilation is employed, would be to test the preservation of organic substances in apartments through which a constant stream of filtered air would be driven; in other words, into which the ingress of the atmosphere would be prevented by the outward rush of a current of filtered air. Should such an experiment prove successful it might be a valuable mode of ventilation in hospitals, dissecting rooms, etc., and even be deemed sufficiently useful to lead to its adoption in manufacturing establishments where putrescible substances are employed, such as meat-packers, dairies, etc.

Permit me to express the hope that these remarks will induce some experimenters, with better opportunities at their command than I have, to undertake the further investigation of this interesting subject; but, at the same time, let it not be forgotten to accord a full mead of praise to the discoverer of the air-filtering power of cotton—Prof. Tyndall.

N. J. Nunn. M.D.

EXCERPTA.

Quackery in the Garb of Piety.—We have received several letters asking for information about a nostrum which is extensively advertised in a style somewhat similar to that adopted by a quack, "whose sands of life had nearly run out" a number of years ago, but who seems to be at the bottom of the present enterprise, or else has been successfully copied by another. The latter pretends to be a minister of the Gospel and a former missionary at Para, where he asserts to have become acquainted with the wonderful restorative properties of this compound, which consists of extract of corassa apimis eight drachms, extract of selarmo umbelifera four drachms, powdered alkermes latifolia three drachms, and extract of carsadoc herbalis six drachms. In his compassion for unfortunate sufferers, this good and pious quack offers to send this wonderful remedy, securely sealed and accompanied by directions and some excellent advice, for the modest sum of $3.30 by express or $3.50 by mail, which price includes the government stamp, and is just what it costs him; he seeks no other reward than the satisfaction of doing good and the blessing of an approving conscience. His means make him independent, and he goes to all this trouble merely because the drug stores cannot be relied upon to procure new remedies of pure quality.

To inquirers we have simply to state that there are no plants in the Amazon valley, or anywhere else, bearing the above names, and this alone should be sufficient to stamp the enterprise as an imposition, merely undertaken for the purpose of catching the dollars of dupes.

A quack of the same stamp, simulating piety and frankness with the view of the more readily drawing the money of the credulous, was exposed by the *Philadelphia Times* of November 14. His prescription for the sure and speedy cure of consumption, etc., which he offered to put up at $3, was as follows:

Extract Asiatic cannabis sativa, two ounces; extract Asiatic hashish sativa, three ounces; verbena hastata, two drachms; extract diasma, three drachms; pulverized cinchona bark, two ounces; extract cashgar leaves, (blood root) three ounces; inulin, one drachm; loaf sugar, one pound; rum or gin, half pint; cold water, one pint.—*American Journal of Pharmacy.*

DEATH FROM THE INHALATION OF ETHER.—We regret to have to record a case in which the administration of ether terminated fatally, and which occurred in the practice of Dr. G. M. Lowe, of Lincoln. The patient was a lady forty-eight years of age, who had discharged the duties of a governess in the family of Dr. Lowe, and had for some time past been suffering from cancer of the breast. A consultation was held, and the removal of the tumor determined upon. The administration of the ether was confided to Dr. Mitchinson, who had had large experience in its employment. All proper precautions appear to have been taken. Dr. Mitchinson examined the heart, and, finding it rather feeble, directed the patient to take a little brandy and water. She was quite cheerful, though somewhat nervous. Half an ounce of ether was poured on the inhaler, which was placed over the mouth in the usual way. The valves were open, and gave free ingress and egress to the air. After a few inhalations the patient's face suddenly became turgid and the hands white. The inhaler was at once removed, and the tongue brought forward, cold water dashed over the face, and the chest rubbed with brandy, but the breathing became stertorious, the face more and more congested, the pulse failed, there was an effort at vomiting, and death took place within a few seconds.—*Lancet.*

GERMS IN DISEASE.—According to observations reported to the French Academy, MM. Pasteur and Joubert show that the terrible animal disease which is known as *charbon or sang de rate* (carbuncular gangrene), is caused by microscopic bacteridia, which was first observed by Dr. Davaigne, in 1850. It may, therefore, be classed with trichinosis and the itch, as a parasitic disorder. Vibrios, bacteria and bacteridia, are all found under two essentially distinct forms; either in translucent threads of variable length, multiplying rapidly by division, or in groups of little brilliant corpuscles formed in the interior of the threads, which separate from the parent, and constitute an apparently inert mass of points, from which countless legions of filiform individuals may come, having the same twofold methods of reproduction. The threads may be killed by drying, or by a heat much below that of boiling water. The germs, when dry, withstand temperature from 120 deg. to 130 deg. C., or 248 deg. to 266 deg. F.—*Medical and Surgical Reporter.*

ASPIRATION OF THE PERINEUM AS A MEANS OF DRAINING THE LOWER PART OF THE PELVIC CAVITY.—Noticing the various procedures of meeting this difficulty, and the particular interest given it by the profession, I hope that a suggestion to this end may not be out of place. Among the various modes of draining the pelvic cavity, there seems to be none, as yet, that gives perfect satisfaction, none that affords entire safety to the patient, nor perfect evacuation of the pent-up fluid.

I think that a safe way of getting rid of the putrescent matter forming in this cavity, would be by aspiration through the perineum. As there would be no danger of puncturing the peritoneum, and having the advantage of not being troubled with fecal matter, or secretions of the womb, as in case of making openings through the rectal or vaginal walls, and as the perineum is at the bottom of this cavity, forming its floor, we would have no gravity to contend with. Whenever it is necessary to give vent to fluids forming in the pelvis, it seems to me that aspiration through the perineum at various intervals, would be less irritating than the continued presence of drainage tubes. Undoubtedly, the safest place to evacuate the pelvic cavity is through the perineum.—*John M. White, M.D., in Medical and Surgical Reporter.*

The following article, written by Dr. A. Means, of Oxford, Ga., on Electro-Physiology, is copied from the *Southern Medical Journal* for March, 1848, then edited by the late Paul F. Eve, Augusta, Ga. The views announced by Dr. Means are reproduced by us now, that physiologists may determine to what extent the theories then advanced on the subject by this learned chemist have been verified by subsequent investigations:

ELECTRO-PHYSIOLOGY.

THOUGHTS UPON THE ADAPTATION OF THE ANIMAL ORGANISM IN THE GENERATION AND MAINTENANCE OF THE ELECTRO-VITAL CURRENTS, Etc.

The theme which has elicited the present dissertation, together with the tenor of arguments adopted in its discussion, has already, under another form, met the public eye. But the subject having been regarded of sufficient interest to the profession to entitle the views there advocated to a place in the pages of the *Journal*, I have consented to furnish them for publication, together with such other additional reflections as the very limited time at my command will allow me to supply. It is due perhaps to myself, as well as to the scientific and practical character of the organ through which this communication is now presented, to entreat for it an attentive and unprejudiced perusal, and to express the hope that whether the views which it inculcates be adopted or rejected, they will not, after such examination, be regarded as the mere visionary speculations of a prurient and ambitious philosophy, which constructs its airy fabrics without the supports, and beyond the region of facts, but as the patient deductions of sober reason, purporting, at least, to be drawn from ample experiments, and from the known operation of recognized and established physical laws, some of them, it is true, at first sight, novel and startling in their character, but nevertheless, demanding the confidence of the honest and intelligent enquirer after truth.

Our undisguised conviction of the growing and valuable importance of electro-physiology to the medical philosopher as well as the practicing physician, must be our apology for so earnestly inviting professional attention to the subject.

Since the *body* of the arguments here presented were drawn up in their present form, it is proper to remark that the elaborate and scientific researches of Professor Matteucci, of the Pisa* University, embodied in "Lectures on the Physical Phenomena of Living Beings," has reached me, and to which I will occasionally take the liberty to refer. And although the views of this profound physiologist may not in all their *details*, harmonize precisely with those which are respectfully maintained in the present article, it is unaffectedly gratifying to find the *great fundamental* doctrine here defended, unequivocally announced, as the only reasonable conclusion to be drawn from his laborious and critical experiments upon animal nature. I allude to the generation of electric currents in the human body as the functional result of certain portions of its organism. His language is: "It would be absurd to suppose that the chemical actions of living beings, all of which develop heat and often light, would not be accompanied by the production of electricity." From his experiments he says, "the existence of an electrical current in the muscles has been well demonstrated, and its principal laws are established." An opinion to which we ourselves have been recently committed before an intelligent class, he fully sustains, viz: that "Galvani's assumption" (advocating the existence of animal electricity, and generally supposed to have been disproved by the after experiments of Volta, etc.) "was not erroneous, since a great number of facts discovered by him are certainly due to the electricity *developed in*, and *proper to*, animals."

While it might under other circumstances constitute a subject of interesting enquiry to trace the triumphant progress of the science of chemistry through the last half century, and individualize its immense contributions to our profession and to the world at large, the object had in view in this essay will limit us to the examination of a *peculiar* class of facts (to which allusion has already been made in the foregoing remarks) disclosing new and important principles which deservedly command the increased attention of the philosophic world at the present moment, and destined as we believe, to effect signal revolutions in the psycological as well as physiological views which have heretofore obtained among the ranks of the learned.

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* In Italy, founded in 1838.

To the investigations of chemical philosophy have been assigned the laws and properties of that invisible, potential and universal agent, whose mysterious *modus existendi* has hitherto baffled the penetration of the astutest intellect, but whose illimitable power and ubiquitary presence are so strongly vindicated in the roll of the thunder, the whirl of the waterspout, and the corruscations of the aurora, or in the less startling, but no less interesting modifications of its action, detected in the violent and spasmodic throes of the human muscle—the intensity and brilliancy of the charcoal lights, and the vivid and instantaneous combustion of the metals in the line of a galvanic circle, or in its still more recently recognized forms of terrestrial magnetism, magneto-electricity, and electro-physiology.

To the views, then, which have forced themselves upon our attention in examining this strange and subtle, but effective and pervading, agent in its connexions with the animal economy and the laws of life, we beg leave mainly to confine the investigations which may follow. Nor, in canvassing the topic before us, will our limits allow, (did the reliable data at our control justify it) that detailed survey and elaborate argumentation which a persistent and incorrigible skepticism demand, and which the ever accumulating resources of science shall, at no distant day, triumphantly furnish. The recent ascertainment and novelty of many of the facts to be submitted, must, in the present state of our knowledge, necessarily leave *any* theory projected for their solution, embarrassed with unexplained difficulties which time and research can alone dissipate. It is the province of sound philosophy ever to make a clear distinction between *facts* and the *reasons* of them. *One fact* properly authenticated may not be rejected or challenged on the claims of a thousand adverse theories, though the rationale of its origin may remain unexplained for centuries. The very spirit of the Baconian philosophy supposes the previous evidence and patient classification of facts, from which physical laws are to be deduced, and rational theories constructed. And when in the progress of discovery the accumulation of authenticated testimony requires the abandonment of a supposed law, or the renunciation of a favorite theory, candor, conscience, and science demand at our hands its prompt surrender. But when the field of observation is large, interesting, and comparatively unexplored, with only a few well defined and settled points within the range of intellectual vision, and these, in their relationships and bearings, open to the enlightened conjecture, *theory*, cautiously adopted, is not only admissible, but by systematizing our views, stimulating enquiry, and directing experiments, is powerfully instrumental in evolving truth and enlarging the boundaries of knowledge. Such, precisely, are the conditions which surround us when attempting to prosecute our enquiry into the subtle and recondite causes of vital phenomena by the aid of the guiding lights which electricity and the organic sciences hold up to our view. In former ages this whole interesting region lay profoundly submerged in the deeps of popular and professional ignorance. All was one wide waste of waters where the ark of speculation floated on in its devious and doubtful course. But time has made its steady progress, the deluge has begun to assuage, and the pioneer dove which had once and again been despatched by philosophic enquiry, only to return on drooping wing from her cheerless flights, has at length appeared with the olive leaf in her beak. Summit after summit now peers above the flood, until a hundred lofty peaks are glowing in the sunshine of science and the ark is seen settling on the Ararat of truth. And although the physiologist of the present age cannot define all the connexions which subsist between these bright elevations, that lie like sunlit islands upon the retiring seas, yet the waters will have soon found their lowest level, and their beautiful natural relationships will be distinctly traced to the great *fundamental range* of *physical laws*, which sustain and characterize the whole organism.

But more directly to the execution of my purpose. So uniform and harmonious is nature in the maintenance and execution of her laws, that by the aid of observation and analogy, we may generally determine with tolerable precision the habitudes, functions or phenomena of bodies, from their position, conformation or structural arrangement. With such inimitable exactitude are these laws observed that a *single* fossil bone, exhumed from its isolated bed, by the unerring physical characters which it bore, enabled the learned and sagacious Cuvier to read its natural history—mentally to reconstruct the whole skeleton, and to classify the original animal with the genus and species to which it belonged. Indeed but for these invaluable indications, our researches in comparative anatomy, physiology, hygiene, mineralogy, geology, and the kindred sciences, must be seriously impeded, if not finally arrested. In view of this pervading and operative rule in physics, then, we propose briefly to examine whether the conformation, organic structure, and physico-chemical phenomena of the human body, seem to indicate an adaptation, or conformity, to the known laws of the electric fluid, in its variously modified forms of action. Allow me, however, in advance, to remark, that, at the present day, to doubt the physical agency of light, heat, electricity and molecular attraction, in controlling the elements and determining the functions of organized living bodies, is to overlook the palpable analogies of nature, and defy the latest and clearest conclusions of experimental philosophy. What candid observer can fail to recognize in the vegetable and animal economy, the presence and activity of the same laws which govern the inorganic kingdoms, only modified and made subordinate for the time being, to the supremacy of the vital principle? Light, acting upon the leaves of vegetables, effects the decomposition of carbonic acid gas and the exhalation of oxygen, after the same manner that in the presence of chlorine, in inorganic bodies, it liberates the same gas by the decomposition of water. Light is refracted too by the lenticular structure of the human eye, just as by a glass lens of similar curvature. Caloric is radiated and absorbed by plants and animals as well as by inorganic bodies. Electricity finds a ready transmission along the living vegetable and animal tissues, as though they were lines of iron or copper wire, and decomposes the circulating salts of the blood, just as it effects analogous changes in saline solutions beyond the dominion of life; while the laws of chemical affinity are continually active in maintaining or destroying particular aggroupments of molecules, often different, it is true, from the inorganic arrangements of the same elements, but dependent solely upon their previous existence and properties for all their new phenomena; for in the appropriate language of Liebig, "all the organs together cannot generate a single element, carbon, nitrogen or a metallic oxide." Surely then we are authorized to commence the survey we have intended.

1st, then: *Electricity may be generated by the friction of solids, or of solids and fluids.*

This well-known law is exemplified among solids, by rubbing together two electrics—as, silk and glass—cat's fur and sealing, wax, etc. May not the warmth produced by brisk friction of the hands together, depend upon the calorific energy of the electricity thus evolved from the non-conducting cuticle—and its immediate absorption and diffusion through the humid subcutaneous tissues? In advocacy of this view, it may be stated that if the epidermic surface be moist, and therefore unfavorable to electric accumulation, heat cannot be generated, or feebly, at best; just as the bits of wood used amongst some of the least civilized nations for kindling their fires, must exhibit dry surfaces before ignition is effected.

But, again, let a portion of mercury be included in a thin glass tube, a foot long, and well secured by a cork—then shaken briskly from end to end—the cork removed, and the tube presented to an electrometer, and it will give signs of strong electrical excitement. Now does not the whole sanguiferous circulation, by a kindred process, contribute to the supply of the normal amount of electricity which the animal body requires, in the constant friction of its fluid mass against the sides of the tortuous cartilaginous tubes through which it passes, hurried on by the powerful *vis a tergo* of the great central muscle—resisting in its pulmonary and systematic career the superincumbent atmospheric pressure of more than thirty-two thousand pounds upon a body of ordinary dimensions, while the compressions and concussions which are the necessary results of muscular contractions and expansions, contribute their quota to the general stock? The important discovery recently made in frictional electricity, comes in opportunely to sustain the views here entertained, viz., that globules of water, and of several other fluids, hurried on with great velocity through tubes by the impulsive force of steam or compressed air, evolves electricity freely. Indeed, the most powerful arrangement hitherto known for the production of quantity is a hydro-electric machine, constructed upon the principal above named, by Mr. Armstrong, and exhibited two or three years since at the Polytechnic Institution, in Regent street, London. Such was its power that even paper and wood shavings were inflamed in the course of the spark.

2d. *Electricity is evolved by changes in the condition of bodies from solids to fluids, and from fluids to gases, or the converse, as proved by Harris, Turner, Lavoiser, and La Place and others, and also by chemical combinations and decompositions, as amply illustrated in the experiments of Pouillet on carbonic acid, Wollaston upon the oxidation of electrical amalgum, etc.*

The elements of bodies are known to exercise certain electrical relationships to each other: those which are most highly positive, as carbon, hydrogen, potassium, sodium, etc., exhibiting the most vigorous affinity for those on the negative extreme, as oxygen, sulphur, nitrogen, chlorine, etc. Now these are the very elements which are found to be in most active play in the animal economy, and in the exercise of their affinities might he expected to evolve electrical currents proportionate to the intensity of their chemical action, and we only regret that our limited time will not allow to trace the various chemical reactions incessantly going on among these elementary bodies in the animal organization. It is due, however, to a clear conception of our views that specific reference should be made to some of the widely prevalent and well known operations which are constantly going on in the inorganic as well as the organic kingdoms around us.

The results of this law, then, are seen exemplified on the most magnificent and grand scale in those meteorological changes which mark the varied year. The evaporation going over the whole liquid surface of our globe, by which water assumes an aeriform condition, and again the condensation of of vapor, thus formed, in the higher regions of the atmosphere, into fluids, and solids, as rain and snow, or hail, all serve to liberate immense volumes of the electric fluid. For a similar reason, the sudden and violent changes of chemical condition produced by the molten mineral masses and hot elastic vapors, disgorged from volcanic craters when coming in contact with the cool and open air, generate abundantly those vivid lightnings which have for ages past blazed around the summits of Ætna and Vesuvius during their great eruptions. Now, recent investigations in organic chemistry have disclosed the fact, that large quantities of this fluid are evolved during the most silent and gentle of the vital changes, as in the germination of seeds, and during the respiration of plants through the expanded surface of their leaves and petals. Pouillet has shown "that the surplus electricity arising from a verdant area of 100 yards square, is sufficient to charge a powerful battery." Water is undergoing pergetual decomposition in the process of vegetable nutrition, and Faraday, after patient experiment upon the subject, has announced the opinion that the quantity expended in separating the elements of one single grain of that fluid, would have produced a strong flash of lighting! Thus, under the high laws of animal life and within the pale of the human constitution, similar changes are incessantly going on, attended by similar exhibitions of the electric fluid. Oxygen, entering the circulation by pulmonary endosmosis, unites with the iron of the red blood-globules, and is borne onward as the hydrated peroxide of the metal in solution, until by a votal process it assists in effecting the transformation of the various tissues—absorbs a portion of the carbon—then becomes carbonate of the protoxide, and after reaching in its career, the surface containing oxygen and hydrogen, undergoes another decomposition by which carbonic acid is eliminated and hydrated peroxide of iron again formed to recommence the accustomed circuit. The changes of the ingesta which occur in the animal stomach, and the auxiliary organs of digestion and assimilation, furnish additional sources of electro-accumulation. (*To be continued.*)

FOR GONORRHŒA.—Dr. Leonard says: Quinine 12 grains: acid sulph. aromar., 15 grains; aquæ rosæ, 4 ounces. Ft. injectio. Wash out the urethra and use half an ounce of the fluid at a time, two or three times a day, retaining it in contact a short time. This is the best local treatment I have found. It does not preclude the usual antiphlogistic treatment during the inflammatory stage, but it will take the place of any or all of the specifics in this disease.

A NEW MUCILAGE.—The *Journal de Pharmacie* states that if, to a solution of gum-arabic, measuring 8½ fluid ounces, a solution of 30 grains of sulphate of aluminum, dissolved in two-thirds of an ounce of water, be added, a very strong mucilage is formed, capable of fastening wood together, or of mending porcelain or glass.

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Original Communications.

SUCCESSFUL OPERATION FOR STRANGULATED HERNIA IN A YOUNG LADY.

By HENRY F. ANDREWS, M.D.,
Physician to St. Joseph's Orphanage, Washington, Wilkes County, Ga.

Although hernia is, by no means, a rare disease, and its relief by an operation of such frequent occurrence as to render it not at all uncommon, yet the following case may not prove altogether uninteresting, on account of at least one feature in it; that is, the occurrence of *inguinal* hernia in a female, and a young lady only sixteen years of age, which is quite unusual. It is a well-established fact that females are much more liable to femoral hernia than males, but not so liable to inguinal.

I give the following entirely from memory with regard to everything except dates. I kept no notes of the case, and can give no minute details, such as frequency of pulse, respiration, etc., but the facts of any importance are all correctly given.

On Wednesday, January 21, 1876, about ten o'clock A.M., I received a note from Dr. J. S. Lane, requesting me to meet him and Dr. H. Q. Harper in consultation, at the residence of Mr. C., some nine miles from this place, and in the village of Rehoboth. The note also stated that the daughter of Mr. C. was suffering with strangulated hernia, and contained the request that I bring instruments and everything necessary, and come prepared to operate.

Misprint

On reaching the house, about twelve o'clock M., I found the patient to be a young lady sixteen years of age, and suffering as the note stated, with strangulated hernia. The tumor was upon the right side, and proved to be oblique inguinal hernia.

The disease was of about one year's standing, and she had been accustomed to the wearing of a truss, but this becoming too weak or too small from her growing, failed to support the part properly, and to keep the intestine from descending, at times.

On Monday morning the 19th, while at school, the intestine came down and caused such intense pain that she fainted. She was taken home, about half a mile distant, and the family physician, Dr. J. S. Lane, sent for. On arriving, he endeavored to reduce the hernia, but failed. He persisted in his endeavors to reduce it by taxis, and gave chloroform, used the warm bath, and nauseants, and tried everything recommended in such cases. He remained with her all day, and through the night, and then sent for Dr. H. Q. Harper, a neighboring physician. On his arrival, efforts to reduce were renewed, and taxis, aided by all the usual adjuvants employed in such cases, was persisted in without avail. There was excessive pain and the efforts to reduce caused great aggravation of it, so that anodynes—especially opiates—were freely given. These two gentlemen remained all Tuesday night, and on Wednesday morning sent to this place for consultation.

On hearing the statement of Drs. Lane and Harper, I was satisfied that an operation would be necessary as the only means of relief, and upon a careful examination of the tumor and an effort to reduce it, I was more thoroughly convinced. This conclusion had already been reached by both the other physicians, and the nature of the case was carefully explained to the parents, and also to the patient. I stated to them that we would put her fully under the influence of chloroform once more, and use every means to reduce the hernia, but, in case we still failed, we had determined that there was no other hope of her recovery except by the knife, and that I would, in that event, operate without allowing her to come from under the influence of the anæsthetic. The consent of all interested having been obtained to proceed as we deemed best, she was immediately brought under chloroform by Dr. Lane, which she yielded to in a short time, and in a most pleasant manner. Taxis was again tried faithfully, but with the same result as before. There was a peculiarly firm, obstinate kind of sensation experienced on pressing upon the hernia, which gave me the impression, at the first touch, that it could not be reduced except by an operation. After we had tried to reduce it in every way we could, and failing, I took the knife and made an incision through the integument over the tumor. I then divided the layers carefully, without regard to the number of coverings, which I think is utterly useless, if not impossible to be done upon the living subject. The rule which I regard as the one of greatest importance is, to cut until you come to the sack—the only important point being to know the sack when you reach it, and to be able to distinguish between sack and bowel. Of course this cutting must be done with great care upon the grooved directory, each layer being taken up and divided separately till the sack is reached, and it is of no importance whatever, whether four or forty layers are taken up and divided.

On reaching the sack it was readily recognized by the arborescent appearance of the blood-vessels, and was opened, when a small quantity of serous fluid—some two or three drachms—escaped, and the bowel was brought clearly into view. This was found to be congested, but there was no evidence of gangrene. The stricture being within the sack, I passed my finger up to the external ring, where there existed a very tight stricture, through which it was very difficult to pass the point of the finger nail and to introduce the point of a probe-pointed curved bistoury (I had no hernia knife with me, though I was not aware of the fact till I went to prepare for the operation). After introducing the bistoury, I cut, according to rule, directly upwards, nicking the stricture, which gave way, admitting the bowels readily, when I withdrew the knife.

The intestine was returned to the cavity ef the abdomen, the edges of the wound drawn together, and secured by several points of interrupted sutures, the parts thoroughly cleansed, the sutures supported by adhesive strips, a compress of linen laid over the wound and secured by several turns of a spica bandage, when she was allowed to come from under the chloroform.

She complained of a pain in the abdomen and was quite restlless. I injected one-fourth of a grain of sulphate of morphia in the arm, which relieved the pain considerably, and caused her to rest more quietly.

I left her some two hours after the operation, at which time she was doing very well, pulse good and everything indicating as fair a prospect for recovery as could be expected. I visited her again on the 23d, meeting Drs. Lane and Harper. She was doing remarkably well. Her bowels had acted the day previous. There was considerable soreness in the region of the wound and some pain in the abdomen; pulse about 100. She had some appetite, and was allowed fluid nourishment. There was some little swelling and tympanitis over the abdomen; tongue clean. I directed the discontinuance of all opiates unless the pain became so severe as to render their use absolutely necessary. The wound seemed to be doing well, and I did not disturb it. I also directed the administration of a warm water enema, with soap and spirit of turpentine, in case the bowels did not move by the next morning, as I was satisfied the action she had the day before did not come from above the strictured portion of the bowel, but was merely a discharge of some fecal masses which had been lying in the intestine below the point. I did not deem it prudent to give a purgative in the condition the intestine must have been in about the strictured point, but preferred to empty the bowels by enema, which I considered incapable of doing any injury.

On the 25th I again visited the patient, meeting the above named physicians again. Found her getting on remarkably well, but complaining of some uneasiness just at the seat of the wound. Her bowels had been moved freely by means of the enema, relieving the swelling and tympanitis entirely, and causing her to feel decidedly more comfortable. Her appetite was now good, her pulse natural, tongue clear, and condition in every way as favorable as possible. Removed the dressings from the wound, which was found to be united except at the points where the sutures passed. At these points there was a discharge of pus. The sutures were all removed, and, after washing the parts well with warm water, adhesive strips were applied, the compress replaced and the spica bandage again applied. From this time she rapidly recovered without a single unfavorable symptom, my next and last visit being on the 28th of June, when recovery was so far advanced and so well assured that I deemed any further attention on my part unnecessary.

Operations for strangulated hernia are deemed amongst the most dangerous and most fatal of surgical operations. This fatality is attributed, in great a measure, to the fact that these operations are almost invariably postponed until too late, or until they are performed merely as a last resort, and as almost hopeless. The consequence is, as we have seen it, that when the sack is opened the bowel is found either in a state of gangrene or so near it that recovery is almost impossible or almost hopeless. In the above case, Drs. Lane and Harper showed their sound judgment in deciding that an operation was necessary before the case became hopeless, and in taking steps to have it performed at once, after all other means of relief had been faithfully tried and had failed, and after waiting as long as it was prudent to wait for relief to come by any effort of nature. When I reached her the first unfavorable symptoms were beginning to manifest themselves. Her pulse was becoming accelerated, she was becoming restless and nervous, and her face began to wear an anxious look, characteristic of approaching trouble of a serious nature. If the operation had been postponed until next day, or even for a few hours, the result would have been at least more doubtful.

In conclusion, I would say that Drs. Lane and Harper not only exhibited consummate skill and judgment in their management of the case, but rendered me invaluable assistance in the performance of the operation.

HEMORRHAGE FROM THE BOWELS.

By E. F. Starr, M.D., Nacoochee, Ga.

During the course of my experience I have met with four cases of frightful hemorrhage from the bowels. Three of these occurred during the course of quasi typhoid fever, the other was without any such complication, and all of which recovered. Two were males and two females. Of the three fever cases, two were females. None of them had previously shown any special hemorrhagic diathesis or tendency.

Of the fever cases, the first was a woman of about forty, married, mother of several children. She had been about two weeks with fever when the hemorrhage began. It commenced unexpectedly and without special premonition. As well as I remember now, there had been no trouble with the bowels in the way of diarrhœa. She had several large discharges of apparently pure blood, much of it clotted, aggregating by estimate, without measuring, three quarts. The complexion was rendered cadaverous, and the prostration very considerable, but after the arrest of the hemorrhage she soon began to revive and gather strength, and the febrile disease was better from the date of the hemorrhage. Her convalescence was not more tedious—was as rapid and satisfactory as that of others that had not been subject to the loss of blood. The treatment consisted in the administration of astringents, such as oak bark, etc., administered both by the mouth and as injections, in large doses and in rapid succession.

The second was a girl, sixteen or seventeen years old. She had been suffering with fever for some time, and was better, had been sitting up, but afterward had been in a relapsed condition for several days when the bleeding commenced. Depletory visitation occurred in the night, and she had, as we may say, two paroxysms of bloody dejections. When I saw her in the morning after the first, I was informed that she had had, during the latter part of the night and early morning, several large, bloody passages, and she showed in her pallid face and by her weak pulse, the effects of the depletion. But at that time the discharge of blood had ceased, and I thought probably might not return. I prescribed ascetate of lead, one or two grains, and opium a fourth of a grain, to be taken at intervals of two or three hours, and inferring that obstruction of the hepatic circulation might have something to do with the hemorrhage, I directed ten grains of blue mass to be taken about noon. At my visit again next morning, I was told the bloody discharge had recurred in the night, commencing this time about nine o'clock, two or three hours earlier than the night before, but had again ceased. I did not see the discharges in this case, but from the account given by the family, the quantity was simply enormous, for one in her condition. The prostration was now extreme and alarming, the pulse barely perceptible, and the palor of the countenance as intense as was possible in a living subject. I administered brandy for present relief, and as it had been paroxysmal, and there seemed a tendency to periodicity, I prescribed quinine fifteen grains, to be taken during the day, and elixir of vitriol ten drops, every hour or two, to prevent recurrence the ensuing night. I remained with her and watched the case that night, but there was no more hemorrhage then nor afterwards. After a few days she began to convalesce, though slowly yet surely and steadily to recovery.

The third fever case was that of a man, twenty-eight or thirty years of age. He, too, was in a relapsed condition—had been able to be up and out, but exposed himself too soon. His loss of blood commenced in the early part of the night, and continued into the forenoon of next day. I was absent from home, and did not see him until ten o'clock in the forenoon. He had recently had, as I was informed, the fifteenth discharge when I arrived. It was small, compared with others he had had. It was still in the vessel, and I saw it. It consisted of what appeared to be about a gill of blood, partly clotted. His wife, and a neighbor present, assured me that he had passed in the fifteen discharges, as they believed, at least a gallon of blood. But blood makes a great show, and they may have over-estimated. Before my arrival he had had one dose of precipitate of iron, which I had sent by the messenger, with instructions to give a teaspoonful with a little water every hour, and this fifteenth discharge was the last that occurred at this time after taking the medicine. I repeated it two or three times afterwards, and he complained of uneasiness through the bowels and hips. I gave him a fourth of a grain of morphine to relieve his malaise, quiet his agitation, and procure him sleep. It had the desired effect.

I left him aromatic sulphuric acid, to take in case the hemorrhage should return. Things went on well until late in the ensuing night, when his bowels became uneasy and the discharges commenced again. He took the acid drops, but thought they did not produce so good an effect as the "red powders." So the iron dust was taken freely, and the discharges soon ceased. When I saw him afterwards, I gave him more morphine, and left him some to take in addition to the iron, if needed. There was no further trouble of this kind, and the patient did well.

It may be seen that the iron and morphine were mainly relied on in this case, and that quinine was withheld, that the test of the iron might be more satisfactorily made. I have often used this article for other hemorrhages, and with almost magical effect, but never before for this condition of the bowels. I have great confidence in its usefulness, and may take occasion soon to offer some remarks upon the hæmostatic properties of the precipitated carbonate of iron.

Do not these cases seem to afford grounds for reflection upon the effects of sanguinous depletion in febrile diseases? Here are three cases of fever—the last two not of an active grade, the first was more so, in which not only depletion, but depletion carried to excess, was practiced by natural or diseased process, and which all recovered with but little trouble after the cessation of the hemorrhage. In two of these cases the fever was literally and practically broken, apparently by the hemorrhage; the other had some fever for a few days afterwards. If the abstraction of a little blood from the arm should be regarded with such horror as has become the fashion in these latter days, how is the happy after-result in these cases to be explained?

There are certainly great differences of grade and quality in different cases of fever, both continued and periodic, and the treatment, to be rational, philosophic and successful, must depend, in a great measure, upon these differences, remembering that the tendency in most fevers is to produce local hyperæmias irritations and inflammations, and that an "ounce of preventive" is sometimes "better than a pound of cure;" and, therefore, in such cases as are not marked by prostration and feeble reaction, such restraint should be thrown upon the circulation as will overcome the above-mentioned tendency, or subdue those local conditions if they exist. To this end, revulsions and local and general abstractions and increased activity of secretions, are often beneficial, not directly, but indirectly, by rendering the case more amenable to other treatment. True science knows no prejudice, nor should the medical practitioner know, nor should tolerate, either prejudice or fashion in the treatment of disease and the selection of remedies.

BOTANY IN ITS RELATIONS WITH MEDICINE—No. 4.

By W. T. GRANT, M.D., Atlanta, Ga.

It is with a great deal of satisfaction that I present the following very interesting items of information to the profession, which I take from a correspondence prompted by the first article of this series.

Some time since I received a letter from Dr. J. A. Shaffer, of Gainesville, Georgia, enclosing some of the seed of some unknown plant, evidently belonging to the nat. order compositæ. In replying to the letter, I asked him to send me as much of the plant as he could, such as flowers, stem, leaves, etc., so that I might determine what it was. He answered, enclosing some of the inside scales of the involucre, together with some of the cotton-like chaff which grows among the flowers on the receptacle, stating that this was all that he could now send, as he has not recently grown the plant. These parts, with the seed already in my hands, were sufficient to enable me to identify the plant as the cnicus benedictus, but perhaps better known by its common name of blessed thistle.

I now quote from Dr. Shaffer's letter:

"Enclosed you will find a few seed. The history is this: Some years ago I visited an obscure family. They had just moved on a place and in a house that had been vacant for several years, and all around the house had grown up in bushes and weeds. I asked the tenant if he was not afraid to live there, as it had the appearance of being infested with snakes. His reply was that he asked snakes no difference, and that he would nearly as soon be bitten by a snake as scratched by a brier. He then pointed to three dogs that had been bitten by rattlesnakes—one three times, the second twice and the other once—and then spoke of several persons (of whom I had heard as being bitten by rattlesnakes); and the dogs and persons were cured by the use of a few seed, that was a sure cure for snake bites. He then told me that from three to nine seed would cure any snake bite. I procured some of the seed and planted them the next year.

"I have not had the opportunity to use the seed but in one case. Last August I saw a young lady one and a half hours after she had been bitten by a large rattlesnake's pilot (upland copperhead.) The reptile had bitten her twice on the instep. One gill of whisky was at once given. When I saw her I was slow to do anything, and wanted to know what the whisky would do. But as the patient grew worse, I mashed up three seed (she then had double vision). and gave them, which did not appear to exercise much influence on the pain or blindness. In ten minutes I gave her three more, and in the next ten minutes three more. In thirty minutes from the time of giving the first three seed, her vision was perfect and she had no pain. She was bitten at 5 P.M. She ate her supper at the table after dark. Next morning she was out at work, and has suffered no inconvenience since.

"I have reason to believe that they are a sure and ready antidote for the bite of all reptiles."

This plant, which my analysis makes the cnicus benedictus, or blessed thistle, is not a native of this continent, although it is naturalized in some localities, but is from Asia and Southern Europe. I may note the rather odd circumstance that all American writers and authors give it the name of centaurea benedicta, while it is known as above to all European authors. Dr. Porcher, in "Resources of the Southern Fields and Forests," states that it is naturalized in the neighborhood of Charleston, South Carolina, and says that the leaves are used in intermittent fever. A similar use of the plant is suggested in the "United States Dispensatory" of Wood & Bache.

Dr. J. G. Westmoreland, editor of this JOURNAL, in his work, "Acology and Therapeutics," introduces the blessed thistle in the character of a remedy for epilepsy. He believes it to act as a brain tonic, and says that it was tested during our late war by Dr. W. F. Westmoreland, and found by him to be valuable. This being true, why should it not serve a good purpose in other neurotic troubles, especially in such as have a convulsive tendency? In the "Acology and Therapeutics," the following way of using it is recommended in epilepsy:

"Boil sixty grains of the dried leaf in one pint of water for a few moments. Of this decoction, give three or four ounces three times a day."

The reader will find that the blessed thistle is mentioned by many medical writers, and he is referred to them for further information. But no mention is anywhere made of it as a remedy for the bite of poisonous serpents. I propose to plant some of the seed next spring, if all goes well with me, and will then, if I can, test its virtues by experiment. In the meantime, if any one desires to try its value, I presume that a few seed can be obtained of Dr. J. A. Shaffer, of Gainesville, Georgia.

In the course of my botanical studies, I have found a number of plants which, in their different localities, have a high reputation as remedies for snake bites, and as I am now engaged with this subject, I will record their names and leave them to the future experimenter.

The platanthera stricta is an orchid which grows abundantly near the sea-coast, but thins out up the country until it is wanting in the latitude of Atlanta. This plant by some authors is called habenaria cristata. I can only repeat what is told me of it. In Wayne and Glynn and other portions of lower Georgia, I have been very much interested to see how strong the faith was in this plant. Indeed, I was assured by them, so great was their faith, that the rattlesnake would not bite a man if he had the root in his pocket. One gentleman, a great deer hunter, told me that he had cured his dogs with it when bitten. The tincture of the root was used.

The baptisia pertoliata, one of the pea tribe of plants, and generally found growing in the same localities as the platanthera, has a like reputation, but is not so well known. The baptisia grows on the high and dry sandy ridges, while the platanthera prefers lower and damp situations.

Prof. W. T. Feay, a superior botanist, in a letter to me some years since, tells of the use of the baptisia as follows: "A gentleman in Florida had a negro woman bitten by a rattlesnake. A physician was immediately sent for. But a neighbor in the mean time recommended the use of this plant in decoction. It was done, and when the physician came the negro was well."

The amsonia ciliata, which I have seen only in Montgomery and adjoining counties in Georgia, is another of these remedies. Also the lycopus virginicus, a small plant, which I think may be found on nearly every stream in Georgia.

The following plants are mentioned in works on pure botany, as possessing antidótal virtues in the rattlesnake's bite: the liatris squarrosa, the nabalus albus, and the agave virginica.

The following quotation is taken from a little book bearing the title, "Life Among the Indians," and written by J. B. Finley, who was a missionary to the tribes which occupied southern and eastern Ohio, before its settlement by the whites: "We had not proceeded more than four miles till he was bit by a rattlesnake between the heel and ankle, his leggin not being tied down to his moccasin. He immediately killed the snake, and then went a few steps and pulled up a weed resembling a flax stalk, only not so tall. He took the root and chewed and swallowed some of it. The rest he applied to the wound. In a few minutes he became very sick, and began to vomit, and threw up something green and stringy, like poison. He then made the second application, and the third; and in an hour went on his journey without any difficulty. The bite did not swell more than if he had been stung by a wasp or bee. This herb has a yellow root, about the thickness of a darning needle. The stalk is single, about nine inches long, and its leaves resemble those of the flax stalk."

It seems to me that this plant could be easily identified from this description, by any botanist, and I would suggest that it be sought for on or near the Muskingum river, in Ohio. At any rate it will be found, if Mr. Finley can be relied on, somewhere in the lower part of that State. I cannot now give more particulars, as I made the above extract from the book while reading it about a year since, and am not now able to find the book, although I am very sure that I then got it from the Young Men's Library in Atlanta. But it cannot be found now. Some member of the Muskingum Medical Society, whether a botanist or not, could perhaps ascertain something about the plant. Would Dr. L. C. McElroy, or some other member, investigate the matter and publish the result?

I am satisfied that the blessed thistle will serve every purpose, but there can be no harm in multiplying reliable medicines.

I now come to the most difficult part of my work, namely, to offer a plausable explanation of the *modus operandi* of these remedies when they relieve a patient of the terrible suffering and death which result from the bite of venomous serpents. When a man is bitten, the poison which is injected into the wound through the fangs of the serpent is very quickly absorbed and distributed by the arteries, through the whole system, to wither and destroy the vitality of every part. I am disposed to believe that these remedies, when they do answer the purpose at all, do it on the antidotal principle. Wherever in the system they meet the poison, they at once neutralize it, as fully and as effectually as an alkali will neutralize an acid. It is very evident to me, that these poisons destroy life by their direct action upon the vital nerve centres, by either paralyzing or destroying their function. I must think that these nerve centres escape organic injury almost wholly, and are only injured functionally; for if it were otherwise, it would be very certain that no person who is bitten by a poisonous snake could, by any possibility, recover from it for some time, and not until the organic lesion of the centres had been healed. And yet it is quite a common case, as in the one above mentioned by Dr. Shaffer, for the patient to recover perfectly within a few hours. How could this possibly be if the nerve centres suffered an organic lesion?

I think that the symptoms in a bitten person all point to destroyed or perverted function of the nerve centres, as the principal effect of the poison. If this opinion be true, then it seems to me that we cannot well reach any other conclusion than that the remedy antidotes the poison by chemically neutralizing it. Let us take the only other possible view and see how it answers. The only other way by which a remedy can counteract a poison in these cases, is by leaving the poison itself alone, and relieving or remedying the evil it does. In its passage through the system, the poison comes upon a nerve centre and straightway throttles it as we may say. But the remedy in quick pursuit, finds the centre disabled, and immediately, by its own inherent virtue, restores it to health. And in this manner the remedy pursues the poison, undoing the evil it has done, until finally the poison is either exhausted, or, what is more probable, it is expelled from the system through some of the emunctories. Is this a reasonable view of the action of the poison and its remedy? I cannot think that any one will attempt to maintain it.

I must say that it is highly probable that alcohol and ammonia, in ther earlier effects in these cases, do act by directly sustaining the nerve centres until the first danger is passed. But the fact that neither the alcohol itself, nor any of its secondary products, can be detected in the body afterwards, would seem to point to the fact that it has entirely disappeared in neutralizing the poison. And this could scarcely be true, unless there was some chemical operation taking place.

ATLANTA MEDICAL COLLEGE CLINIC—SERVICE OF PROF. J. G. WESTMORELAND.

REPORTED BY S. W. JOHNSON.

November 5, 1877.—M. B., colored, male, æt 60, by occupation, whitewasher.

Gentlemen: The history of this patient, as just given by himself, is duly considered in connection with existing symptoms. You remember his statement, that for four or five weeks during last summer he was confined to bed with painful swellling and soreness of the ankles and feet. That description answers well for acute rheumatic inflammation. His present symptoms denote subacute inflammation of the same character in the right knee and ankle. While implicit confidence cannot, of course, be had in the details of such histories, they are important, and sometimes indispensable factors, in the formation of correct diagnosis. Some constitutions are prone to rheumatism, and the history giving evidence of a former attack confirms us in the opinion to which the symptoms now present has led. The soreness, imperfect inability and slight pain now present are perhaps due in part to the results of the former attack, and to a return of the disease in a subacute form. It is not uncommon to find stiffness and even soreness of the joints following acute rheumatism, probably caused by deposits on the ligaments and other parts connected with the articulation. These symptoms are particularly noticeable in cloudy weather, and are probably then aggravated by electrical changes.

In a case purely the result of rheumatic inflammation, without any return of the disease, the proper treatment for rheumatism proper will not be found successful. This condition of the joints following rheumatism and the painful soreness along the course of nervous trunks, and aggravated by stormy weather, are called chronic rheumatism, and are probably both caused by the deposit above mentioned. This condition is more rationally treated with means calculated to produce catalysis of the deposited and semi-organized fibrin. Preparations of iodine, particularly that of iodide potassium, have been used for this purpose. Muriate of ammonia will also probably be found useful.

Finding in the case before us evidences of actual rheumatism, I shall more particularly allude to this condition now. Rheumatism consists of a peculiar inflammation affecting more frequently fibrous structures. While some of the local and general symptoms are identical with those of ordinary inflammation, others differ materially. Swelling, soreness, pain, and general fever, exist as in traumatic or other cause, but the migratory character and result on the diseased part, make rheumatism a special inflammation. In uncomplicated rheumatism, suppuration never occurs, and the painful swelling and redness disappear from a joint in a few hours, attacking another in a similar manner.

These strange features of the disease bring us to the consideration of its patholgy. It has been supposed that morbific material, of particular kind, circulating in the blood, causes the local disturbance in question. A more reasonable conclusion, however, I think, is that primary disturbance of the spinal nervous system leads to the migratory manifestations of rheumatism. The exact condition of the cord which causes such development in the joints is not well understood, but the sudden transition from one part to another is conclusive against the theory of deposit from the blood, causing the local inflammation; to say nothing of the deductions to be drawn from the succesful mode of treatment. Those who advocate the blood theory use different and exactly opposite means of cure. One uses alkalies to neutralize a supposed acid in the blood, and the patient recovers; another gives lemon drinks and other acids to destroy the alleged alkaline deposit in the joints, and his patients finally recover. Now the explanation of the recoveries after the use of these opposite plans of treatment, is that the disease will abate without any treatment, as in the case before us. In four or five weeks he recovered from the attack last summer, and, doubtless, without any beneficial treatment.

I adopted a treatment directed to the spinal cord many years ago, and without any settled pathological views on the subject. I read an article in some medical journal, giving the treatment of rheumatism by quinine and opium, which I adopted the first opportunity, knowing no injury could result to the patient. Finding, as I supposed and still believe, benefit from these remedies, I have continued them as the basis of my treatment since, and as proof of the pathological condition leading to the local symptoms.

It is known that quinine is a spinal tonic, from results obtained under various circumstances. Again, in cases which do not readily yield to opium and quinine, I find, often, prompt relief after blistering over the spinal column. Recently, much has been said in journals about the curative action of salisylic acid in rheumatism, and, if true, is corroborative of my theory of its pathology, and also of the propriety of the quinine treatment. It is generally known that salicin is a spinal tonic, having about the same action of quinine, and as salicylic acid is the product of salicin, it is reasonable to suppose that it will answer the purposes of quinine. I have made one test of the acid in rheumatism, and, although one trial is not sufficient to decide upon its merits, I do not think it superior to quinine. After using one hundred and twenty grains in the case during twenty-four hours, I became anxious to effect a cure, and resorted to full doses of opium and quinine, say two grains of the former (⅓ gr. morphine) and ten of the latter, repeated every six hours until three or four doses had been taken, at the same time having the spine thoroughly blistered. In thirty-six hours complete relief and rapid convalescence followed.

In the case before us I prescribe:

℞—Quinine, ... grs. xxx
Morphine, ... gr. j
Mix and make three powders.
Sig.—One at night, morning and noon, in syrup.

A blister two by ten inches applied to the lumbar and sacral spine.

ABNORMAL CONDITION OF THE DIGESTIVE ORGANS

BY FRED. KING, M.D., ATLANTA, GA.

Notwithstanding the fact that a great deal has been written on dyspepsia, I think many physicians are almost entirely ignorant of its causes, and the many pathological conditions that are to be observed in the various forms of the disease. This is owing, in a great measure, to the fact that a majority of us do not regard indigestion of sufficient importance to merit a place among the serious maladies with which we have to deal. When consulted by dyspeptics we are too prone to regard them as hypochondriacs and therefore dismiss them after having prescribed a few bitter tonics and given some direction as to diet, etc. By such hasty and unjustifiable proceedings we do ourselves injury and our unfortunate patient injustice. If any relief is afforded, it is only temporary, and the sufferer finally seeks "quack" and "stomach bitter men," who are ever ready to fleece them of their last farthing.

All abnormal conditions of the digestive organs may be embraced under the one head, dyspepsia; and this term covers such a broad field that it is no easy task for us, when called upon to treat a patient suffering from indigestion, to reach a satisfactory diagnosis without thoroughly studying each individual case. We rarely meet two consecutive cases in which the same symptoms are present. This is owing, of course, to the fact that different organs connected with the functions of digestion are at fault. The symptoms, however, in all cases, are local; that is, they proceed directly from the stomach or small intestines—the first stage of digestion taking place in the former, the last in the latter.

When the symptoms are traceable to the stomach, we may often attribute them to a deficiency in the quantity or the quality of the gastric fluid. It is utterly impossible to enumerate, in a short paper like this, the various causes of this deficiency. We should always carry our investigations far enough to be able to locate, if possible, the exact seat of the trouble with which we have to deal, and then govern ourselves according to the result of our inquiries.

Under two principal or leading heads may be classified all forms of dyspepsia: *First*, labored or difficult digestion; and, *Second*, symptoms of disturbed or imperfect digestion. A sense of discomfort is always the result of indigestion of any kind, while, on the other hand, ease and perfect comfort always follow the proper performance of these important functions.

Dyspeptics are nearly always uneasy, or miserable, while the process of digestion is going on; in many instances this state amounts to the most extreme melancholy. These are oftentimes the only symptoms present. When such a condition as this exists, we may at once conclude that we are to deal with labored or difficult digestion, resulting from a deficiency of some of the elements of the gastric juice, and must therefore prescribe such remedies as are calculated to make up for the deficiency.

If the symptoms arise from disturbed or imperfect digestion, they are traceable to a point lower down in the alimentary canal.

The most prominent symptoms of indigestion—such as regurgitations, cardialgia, catharsis, tympanitis, vomiting, etc.—are so well known to us all, that I deem anything like an extended reference to them altogether superfluous. They all result from different causes—some originating in the stomach, while others come from a point below the pyloric orifice of that organ. An extended review of the many pathological changes taking place in these abnormal conditions of the organs engaged in digestion would be pertinent in this connection, did time and space permit, and would be very conducive to a better understanding of the subject under consideration. But I must hasten on to the consideration of the remedies which, in my opinion, are calculated to relieve many forms of dyspepsia.

In many cases of indigestion I am sure that the prime cause of the trouble may be found either in the stomach or pancreas, and I am satisfied that the latter organ is as often at fault as the former (hence the worthlessness of pepsin alone, in many cases). The symptoms, in a large majority of the cases that have come under my immediate observation, point strongly to the establishment of this proposition. I am decidedly inclined to the opinion that many cases of supposed "chronic diarrhœa" are nothing but indigestion dependent upon a want of proper emulcification. The fats and oily substances passing through the intestines without being duly emulcified, I think act as a mechanical cathartic, just as melted lard purges when swallowed in very large quantities. A careful examination of the fæces in each individual case would throw additional light on the diagnosis when diarrhœa is a leading symptom. The presence of undigested oily substances could be easily detected by solution in water.

Now, as we are taught by physiologists that a certain amount of organic matter (pepsin and pancreatine), lactic and hydrochloric acids, chloride of sodium, potash, lime and ammonia, are indispensable in the processes of digestion, assimilation and nutrition, does it not necessarily follow that a diminution in the quantity or quality of any of these would be followed by general impairment of the great functions of digestion? Should we not, therefore, employ such agents or remedies as would make up such deficiencies? In my experience, nothing has met so successfully all these indications and symptoms and given such universal satisfaction as pepsin, pancreatine and lactic acid, with the addition of muriatic acid in some form. My employment of these substances in the various forms of indigestion during last year, was suggested by chemical observation in regard to the power of these agents over the digestive process.

My experiments were made upon meats of various kinds, breadstuffs, etc., or about what usually constitutes an ordinary meal for an adult. I tried them, also, on coagulated albumen, and found their powers superior to that of anything else I had experimented with. One of the most important among the many advantages possessed by these remedies over all others suggested for the relief of indigestion is, that they contain the natural acids secreted by the stomach—lactic and hydrochloric—without which neither fatty substances nor coagulated albumen is changed by pepsin or pancreatine. Pepsin will not emulsify fats, nor will pancreatine dissolve coagulated albumen, but all of the substances mentioned will accomplish both.

And now, before reporting, or, rather, furnishing synopses of a few cases where they were prescribed, I will give my reasons for diminishing the dose from time to time. I did so from the fact that a certain amount of the elements contained in the remedies was absorbed, and of course found their way, through the medium of the circulation, back to the stomach, pancreas, etc., and again aided in the work they were first intended to assist in.

Case 1.—Mr. C. consulted me early in September last, suffering from dyspepsia of long standing. The symptoms indicated that the trouble was near the pyloric orifice of stomach. I gave him the following:

℞.—Lactopeptin, ... gr.clxxx.
Vin. Alb., ... f℥viij.

M. S.—Tablespoonful immediately after eating, three times a day, gradually reducing the dose to teaspoonful.

At the expiration of one month he expressed himself entirely cured.

Case 2.—Mr. S. applied to me in August. He had been troubled with a serious diarrhœa for more than a month. After a careful diagnosis, I decided that indigestion was the prime cause of his trouble. The lactopeptin, administered in same way as in Case 1, relieved him entirely within a fortnight. (Mr. F. was prescribed for in same way on same day and the result was equally satisfactory.)

Case 3.—Tinxy R., colored, married, aged 23; was anæmic, pregnant; suffered from cardialgia and vomiting. I gave her:

℞.—Elx. lactopeptin with bark and iron, . ℥vi.

Sig.—Dessert spoonful ter die.

The vomiting as well as all other bad symptoms soon disappeared.

Case 4.—A little daughter of Dr. C. had capricious appetite; was restless. Various worm medicines had been employed without success. Upon my suggestion, the doctor gave her:

℞.—Syr. lactopeptin comp., . . . ℥ij.

S.—Teaspoonful, gradually diminishing to ten drops, three times daily after meals.

She commenced improving at once, and was soon restored to perfect health.

Case 5.—Dr. B., a professional friend, had suffered for more than two years from neuralgia, which he attributed to indigestion. Ten grains of lactopeptin after each meal soon relieved.

Indeed, I find lactopeptin, or other forms of using pepsin, pancreatine and hydrochloric acid, superior to anything I have ever used in all forms of dyspepsia, intestinal diseases of children, chronic diarrhœa, constipation, vomiting in pregnancy, and in fact, in all troubles arising from abnormal conditions of the digestive organs. Different patients, however, require different forms of preparation. While adult males take the dry powder, liquid or wine, females or children require the elixir or syrup.

These remedies may be given in connection with ferruginous and bitter tonics, cod liver oil, etc., when desirable.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

J. G. WESTMORELAND, M.D., REPORTER.

ATLANTA, Ga., December 3, 1877.

Dr. Taliaferro, President, in the chair.

Dr. Connally reported a case of uterine disease in which tympanitis was a prominent difficulty for a month or more. The abdomen is occasionally painfully disturbed and gives very clear tympanitic resonance. While this condition exists the bowels move freely without relief from the distension. Aromatics sometimes give slight relief from pain.

Dr. J. G. Westmoreland thought that gas sometimes accumulates in the cavity of the peritoneum, and that in all probability Dr. Connally's case is of this kind, since thorough evacuations do not relieve at all the tympanitic condition.

Dr. W. F. Westmoreland thought that gas in this case is most certainly in the alimentary canal. He concludes that gas does not necessarily escape with the discharge of fæces. Reasoning from analogy, thinks it never accumulates in the peritoneum, as it is not found in other cerous cavities.

Dr. Baird thought gas does not accumulate in the cavity of the peritoneum unless by decomposition, and that the case under discussion is troubled by collection in the alimentary canal.

Dr. J. T. Johnson agreed with Drs. W. F. Westmoreland and Baird, and thought gas in the cavity of the peritoneum can only exist from disorganization of the peritoneum, and that the accumulation, in the case reported, is doubtless in the alimentary canal.

Dr. Taliaferro agreed with the gentlemen last on the floor, believing that cerous membranes do not evolve gas, but that food taken into the canal is a prolific source. He thinks that females affected with chronic uterine disease are subject to paralysis of the intestinal muscular coat—perhaps from reflex depression—which leads to accumulation of gas in the canal.

Dr. J. T. Johnson mentioned the case of a young man he had seen who had a pistol shot in the temporal ridge of the right side, one inch above the angular process, passing out at the corresponding point on the opposite side. The subject exhibited no very serious symptoms from the injury. He thinks the ball must have passed through both hemispheres of the cerebrum, and considers it very remarkable that no dangerous symptoms existed.

Dr. W. F. Westmoreland, in connection, mentioned the case of a soldier shot in the forehead without alarming symptoms at once.

Dr. Johnson alluded to another case of pistol ball entering frontal bone without bad symptoms, but the subject afterward died from other injury and it was ascertained by post mortem examination that the ball in the first injury was incisted at least one inch from the surface.

Dr. Calhoun had also, several years ago, the case of a negro girl in which the temporal bone was fractured, a portion of the brain escaping through the opening. The girl was setting up and comfortable, with the loss of brain substance to the amount of a teaspoonful, and pieces of bone piercing the brain. He stitched the dura mater and closed the scalp over opening. Patient never had fever or unpleasant symptoms and came to his office in a week.

Dr. Connally mentioned a case he had ten years ago which was hurt in the evening by a blow with an axe, driving in the parietal bone of one side. The pieces were removed with portion of brain. The dura mater was closed with sutures and no bad symptoms occurred. The patient recovered promptly and without further trouble.

Dr. W. F. Westmoreland mentioned a case of necrosis from injury, in which half the cranium of a soldier was removed. Afterward he went home from the army but nothing further was heard from him.

Dr. J. G. Westmoreland reported a case of labor in which irritable uterus led to unusual delay and difficulty in delivery. A lady thirty-five years old, the mother of four children, had suffered for an hour, when he was called to see her at 1 o'clock A.M. The complaint made by the woman indicated expulsiye throes and rapid progress of labor, but it was ascertained, on examination, that the uterus contracted very feebly, and that the os was not perceptibly dilated. Decided tenderness of the whole organ was manifested by slight pressure upon the abdomen and touching of the os and neck of the womb. This accounted for the great suffering of the patient at each attempt at contraction. An eighth of a grain of morphine was given to allay the irritability, and finding this ineffectual, one-sixth of a grain was given in three hours, with more effect; but as the expulsive contractions of the longitudinal fibers were still imperfect, fluid extract ergot was given, with decided benefit in this particular. Notwithstanding this increase of contractions in force and frequency, they were by no means commensurate with the suffering, and not likely to complete the delivery very soon. After fifteen hours of suffering in this way, the os being very well dilated, but the head only pressing firmly against the brim of the pelvis without any advancement, it was thought better to deliver with the forceps rather than wait longer for more favorable condition of the uterus; and with this view Dr. Taliaferro was requested to call with the instrument. On consultation, however, further test of the effects of opium in relieving the irritability, upon which the want of progress in the labor depended, was determined on, and one-fourth grain of morphine was given by the mouth, and the same amount repeated hypodermically in half an hour. In half an hour more the patient was considerably relieved from suffering, and slept a few moments. In two hours from the time a full test of opium had been determined on, effective pains came on, and in three hours the woman was delivered of a living child without further difficulty.

J. B. BAIRD, M.D., REPORTER PRO TEM.

ATLANTA, GA., December 10, 1877.

Vice-President, Dr. A. W. Calhoun, presiding.

Dr. H. L. Wilson reported the following case:

Mrs. ———, age 47, had been exercising more than usual for several days. One evening, at an entertainment, was very suddenly attacked with vertigo, causing her to stagger and fall into the arms of a friend. In the course of an hour the right side of her mouth was drawn downwards and outwards, the right eye was completely closed, with entire inability to control the lower extremities. A carriage was ordered, and she was driven to her home. Upon examination, I found that she had been menstruating irregularly for a year past. Some three or four months ago she menstruated pretty freely at one or two periods. Subsequently there has only been a slight indication of menses, accompanied with some fullness about the head, headache and considerable malaise. From the above history, I pronounced it hysterical paralysis. There being some constipation of the bowels, I ordered a mild purgative, with *hot* foot-bath. Also syrup phosphate of iron, quinine and strychnine, in twenty-drop doses, three times daily—increasing one drop until thirty-five drops were given. In addition, I applied galvanism to the spine. The next visit I found considerable difficulty in deglutition and speaking; the contraction of the face had almost disappeared upon the right side, and developed upon the left. There was considerable anæsthesia of the entire left side, with an inclination to fall to the left if she attempted to stand. In the course of a week there has been a decided improvement. She can walk with an assistant, and swallows a great deal better, talks better, etc. Her appetite has been good all the while. In addition to the phosphates, she is now taking pill of quinine, iron by hydrogen and extract belladonna. Each day shows a decided improvement, and in all probability she will soon recover her former health.

Dr. W. F. Westmoreland desired, in this connection, to mention one diagnostic symptom in this class of cases.

In the majority of instances when doubt exists, hysteria proper can be distinguished from other nervous troubles by observing that in hysterical conditions a tender spot will be found upon the spine, between the fourth and seventh dorsal vertebræ. Pressure does not always produce pain, but it shows a perverted sensibility.

Dr. Scott, of Henry county, being present, upon invitation reported a case, as follows: A man aged twenty-five years, laborer, after complaining more or less for a week, had a chill, followed by fever. The chill and fever recurred next day. For ten days after this he suffered greatly from severe headache and insomnia, though opiates were freely used. At this state, he was bled to the extent of sixteen ounces, and refreshing sleep followed. A severe nasal hemorrhage the next day was arrested by injecting into the nostril muriated tincture of iron. The pulse came down to thirty-five beats a minute, and remained so for three weeks, when it began gradually to improve, and the man had a tedious convalescence of four months' duration. In the outset of the attack his pulse was about one hundred. Consciousness was not impaired. Diarrhœa in the early stages was readily controlled. He complained of pain in the lower part of his back and in the left hypochondriac and iliac regions.

Dr. W. F. Westmoreland, in reviewing the train of symptoms, arrived at the conclusion that it was a case of typhoid fever. He could not account for the slow pulse, as there were no indications of compression or other serious brain trouble. It may be that one beat was suspended. Has encountered cases in which every other beat was omitted, due some times to organic, some times to sympathetic causes. Has known, in this way, the number of beats to be suddenly reduced one-half, and again, without warning, recover the usual number.

Dr. J. T. Johnson concurred in the opinion that the disease was typhoid fever. He thought the slow pulse was due to some idiosyncracy, and not to intermittent action. The thermometer, if it had been used, might have aided in arriving at a correct diagnosis, but even the thermometer is sometimes guilty of unaccountable freaks. He referred to a case of typhoid fever, occurring in his practice, in which the thermometer one day suddenly ran up to 107 degrees Fahrenheit.

He abandoned all hope, but the next day it indicated 93 degrees. A test of the instrument proved that it was accurate. The symptoms continued alarming for a few days, but improvement set in and recovery ensued. Has never encountered or heard of a case in which such remarkable fluctuation was noted.

Dr. Baird presented for inspection a plaster of Paris splint, for the purpose of illustrating the strength and durability of the plaster, and its advantages over other modes of dressing in certain fractures. This appliance had been used in the case of a fractured femur, and had been worn for six weeks. The mode of application was detailed several weeks ago.

Dr. Connally had seen this case several times, and was greatly pleased with the mode of dressing. He regarded the success attained complete. He reported briefly the case of a young man aged eighteen years, the victim of spinal curvature in the dorsal region. He suffered much from the superincumbent weight. With Dr. Baird's assistance he applied a plaster of Paris jacket, which afforded prompt and entire relief to his patient. Care should be observed not to leave the rollers, with the plaster, in water too long before application, as, in a few minutes the plaster will "set," when it becomes very brittle, unmanageable and inefficient.

Dr. Wilson presented to the attention of the Academy a youth aged about twelve years, the subject of chorea. About six months ago he had a severe attack of dysentery, followed by irregular movements confined to the left side of the body. One of the most remarkable features of the case is the extreme timidity of the boy, which is altogether unnatural. Tonics and general hygienic treatment, while they have improved the general health, have failed to relieve the choracic symptoms.

Dr. Baird said that doubtless a number of distinct diseases were includedd in the general term chorea; but with our present knowledge an attempt to discriminate between them is practically useless. In many cases terminating fatally, no changes are discovered in the nervous centres, while in others pathological alterations, both in the brain and the spinal cord, have been found. The fact that the disease is confined to one lateral half of the body, as occurs in a certain proportion of cases, is due to the suspension of the progress of the disease at that point of its development. The prognosis in this case he thought was favorable. As to the treatment, he advised the ether spray to the spine, from the occiput to the sacrum, every day or two, for ten or fifteen minutes, and the administration of strychnia, in gradually increasing doses, until its physiological effects are obtained, when its use should be suspended for a few days, and the same process repeated ever and anon. This, in conjunction with warm clothing, nutritious, easily digestible diet, bathing, horseback exercise, and general hygienic management, with the bromide of potassium at night, to render the sleep sound, will accomplish the end desired.

ATLANTA, GA., December 17, 1877.

Dr. Calhoun presented a specimen of black cataract, extracted from a man fifty-two years old. At first sight, the cataract was not detected, the pupil looking dark as usual. Close inspection, however, detected the black opaque lens.

The dark color is caused by the deposit of hæmatine, and is a very rare disease. It is the only case he had seen. The prognosis is not favorable in such cases, owing to the disease of the choroid coat which generally exists, and which is found in the case mentioned.

Dr. Baird reported a case of piles, with slight leucorrhœa, in a girl of five years old, the result of worms in the rectum. Santonine and calomel being used, a large quantity of ascarades and some lumbrocoides were discharged, after which no further trouble was experienced.

Dr. J. G. Westmoreland reported the case of a man sixty-five years old, in which a somewhat serious operation was performed from an error in diagnosis, and yet relief was afforded by it. He was called on Friday evening to see the old man on account of a reported difficulty connected with the bladder, but on examination, found a tumor in the right inguinal region, resembling exactly that made by a hernial protrusion. The history given showed that for several months a tumor similar to the one present occasionally appeared at this point while laboring, and that the recumbent posture readily caused it to disappear. For three weeks he had been quite sick, a part of the time confined to bed, but the cause of which seemed not to be known. A few days ago he came to the house, after taking a walk, suffering with the tumor as he had done frequently before, but on lying down it did not as usual disappear, the pain and soreness continuing up to the time of Dr. W.'s visit. The tumor was located exactly over and longitudinally in the direction of the inguinal canal. For two days after the tumor became permanent the bowels were not evacuated, but had been moved three times more recently. Pain was constantly present, with pretty regular paroxysms of increase every five or ten minutes. The patient, though feeble, was able to be raised for a short time; pulse about eighty. The history of the case and general appearance of the tumor decidedly favored the idea of hernia and a strong suspicion of strangulation. After an unsuccessful attempt to return the supposed contents, or even to lessen the size of the tumor, the evidences of prostration increasing the probability of strangulation, opening of the tumor was determined upon. The skin and other tissues were cut through as usual for hernia, but instead of attenuated structures, as generally found under such circumstances, they were greatly thickened, so that an incision four times the usual depth was necessary to reach the canal. When the canal was penetrated the expected bowel did not appear, but a jet of thin pus escaped, and by pressure after the opening was enlarged, not more than an ounce was discharged. The finger could readily be passed up the canal without coming in contact with anything except the spermatic cord, the deceptive elasticity of the tumor—which had not been at all reduced in size—depending, not upon an inflated bowel, but upon the swollen tissues externally. The opening was closed by sutures in the skin, and after the patient's position was changed so as to make the groin more pendent, a discharge of watery pus commenced, and was continued as position favored till perhaps two pints had escaped. The patient seemed very feeble the next day, the pulse 110, but now, three days since the operation, has good appetite, pulse 75, and seems to be doing well.

Dr. J. T. Johnson was in doubt as to the origin of the abscess, whether connected with the spine or the cœcum, but was inclined to favor the latter, as from that point the matter would be more likely to find its way into the inguinal canal.

Dr. W. F. Westmoreland could more readily decide as to the location of the abscess by the appearance of the pus and the length of time that had elapsed since the trouble commenced. If disease of the spine or any other bony structure was the cause, the pus will be thin with shreds intermixed, and would require several months to develop the present condition. On the other hand, the pus would be thicker, and the time necessary to complete the abscess only a few weeks, if connected with the cœcum.

Dr. H. L. Wilson reported a case of diphtheria in which he found satisfactory results from the local application of carbolic acid in the strength of one fluidrachm to the ounce, and internally in the dose of 3 grs. ter die for an adult.

Dr. J. G. Westmoreland reported, also, the case of a boy three years old, with stricture of the œsophagus from swallowing caustic potash. The injury occurred four months ago and the child has not been able to swallow solid food since, being nourished almost entirely by sweet milk and sugar. The stricture is near the lower part of the gullet, and will not admit a bougie larger than a crow quill. The boy's appearance proves the nourishing qualities of the articles of food mentioned, as he is stout, fat and healthy. The treatment consists of the introduction, two or three times a week, and sometimes more frequently, of a small gum catheter, into the strictured portion, but without very perceptibly increasing the size.

Dr. W. F. Westmoreland expressed an unfavorable prognosis, and could suggest no other treatment more promising than that already instituted. His only hope is in the changes which may occur in growth of one so young.

Selections.

Case of Acute Tetanus following a Wound in the Foot.—The following case of tetanus is, I think interesting:

Geo. Smith, aged 10, a fisherman's son of Sambro, on August 2d, whilst barefoot, accidentally ran against a scythe, causing a wound of left instep implicating the extensor tendons, also one nearly severing the little toe of the same foot

He was brought to Halifax and the wound dressed; he then returned. On August 9th I saw him for the first time; wound of instep granulating healthily, a small piece of bone protruding from wound of little toe, which was removed. Sweating profusely, trismus and opisthotonos well marked, with frequent spasms, difficulty of diglutition and respiration, pulse 144, temp. 103 degrees, pain through body, risus sardonicus marked. Gave gr. xvi. hydrate chloral immediately and gr. viii to be given every hour with mustard to whole length of spine, wound dressed with carbolic acid and oil (1-20). Remained all night and administered the chloral myself, with as much milk as he could suck through the teeth and on account of the great difficulty in swallowing, it required much patience to give either. The boy soon slept and was awakened during the night to take chloral and milk. Spasms were much less frequent after the chloral.

Aug. 11th. Worse again, boy refusing chloral, also milk, temp. 101¾ degrees, pulse 130 and weak, sweating profusely, frequent spasms, no relief of trismus or opisthotonos,—remained three hours giving gr. viii, chloral every hour. Gave also during this time half pint of milk. Left him much relieved.

Aug. 14th. Not any worse, pulse 116, temp. 99 degrees, but few spasms, trismus very slightly relieved, spine still stiff but limbs can be bent up on abdomen if care is used. Grains viii chloral every hour, takes but very little milk, bowels relieved by enema, passed quantities of flatus.

Aug. 17th. Was doing well since the last visit, but the boy refusing chloral, the spasms returned to some extent. Gave gr. xvi of chloral, with marked relief and ordered gr. viii of chloral every two hours with as much milk as possible. Boy very weak.

Aug. 20th. Boy better, pulse 98, temp. 99 degrees, spasms few and slight, trismus somewhat relaxed, bowels moved by injection, still fights against medicine and nourishment.

Aug. 23d. Decidedly improving, pulse 88, temp. 98 degrees, jaws still more relaxed, scarcely any spasms except when moved and even then slight, wounds nearly healed. Gave chloral gr. vii every four hours which was continued for a week longer and then given only at night. From this time continued to improve, and on September 7th the boy's father reports that his jaws are looser than ever.

This case is interesting in that it is a recovery from a very acute case, which is rare, that no drug except chloral was administered, no stimulants, and nothing but milk and very little of that for a fortnight.—*Canada Medical and Surgical Journal.*

Some Cases of Arm Presentation.—*Case* 1.—Mrs. B., a stout, healthy woman of middle age, was taken in labor June 18th, 1877. She had always had great difficulty in her confinements, and, with but one exception, had lost her children in the birth. The living one died in infancy.

When seen in the forenoon, she was having strong pains at short intervals. Upon examination, the mouth of the womb was found largely dilated, and the bag of waters tensely protruding. The pressure of the examining finger, though slight, caused the rupture of the bag, and an arm was found to be the presenting part. She was put upon her elbows and knees, and the child was turned with very little trouble. The body was extracted with considerable difficulty, but the head could not be drawn down, notwithstanding the application of the greatest force consistent with safety. Unfortunately, I had not brought my long forceps with me, and the small pair of short ones I had in my obstetrical bag were of no use. The time lost in getting my long forceps—about half an hour—was fatal to the child, of course. They were easily applied, and delivery effected in a very few minutes. The placenta was immediately removed, and there was no hemorrhage. Recovery was rapid, without a bad symptom. The cause of difficulty in this case was a narrow superior strait—autero-posteriorly from a projecting sacral promontory—which opposed such resistance to the passage of the head, that it was feared craniotomy would be necessary; but with the leverage and power of the long forceps, this was obviated. The knee-elbow position rendered version a much less difficult operation than I had previously found it in the dorsal position, and but for the delay in the delivery of the head, the child would have been saved. This shows the necessity of being always provided with a pair of long forceps. And I had made it a rule to always carry them with me when called to a case of labor; but not having had any use for them for some time, I had contented myself with carrying a very light and short pair.

Case 2.—Mrs. C., a small, well-made, healthy, hard-working Irish woman, had been treated by me, for prolapse of the womb, in 1874. The vagina was so relaxed she could only get relief by wearing a large Physick's globe pessary, which answered perfectly. To my surprise, I was called to attend her in confinement in February, 1875. Not suspecting anything wrong, I waited patiently for nature to do her share of the work, but the labor seemed to make no progress, and time wore on slowly. As soon as the womb had opened sufficiently to make a satisfactory examination, it was discovered, as feared from the unusual duration of the first stage, that it was a "cross birth"—an arm presentation. Delivery was effected with much difficulty by podalic version; child born dead. The woman made a good recovery. In this case version was performed in the dorsal position.

On the 11th of August, 1877, I was again called to attend her in her confinement. As on the last occasion, the first stage was very slow. Feeling uneasy on account of the trouble I had had with her before, I soon discovered that all was not right, and to my horror, found it to be another arm presentation. The head was resting in the left iliac fossa, and as no outline of the child's body could be felt, it was inferred to be the left shoulder and arm. My unfortunate experience made me loth to resort to version. Thinking the head might be forced down into the pelvis, this was tried by external manipulation; but it would not move. Conjoined external and internal manipulation was tried; but to make matters worse, the cord prolapsed, and no progress was made. She was then put upon her knees and elbows, notwithstanding she declared I was going to kill her "intirely;" and while in this position the cord was replaced, the arm and shoulder pressed up, and the head forced down by the other hand outside until a strong pain came on, when she was quickly placed on her back. Everything was found to be right. The head had engaged, and there was no chance for the cord to come down any more. She was safe, and I was immensely relieved. Strong, steady pains replaced the unsatisfactory ones that had been going on so long, and the labor progressed naturally. In a short time it was over, and a *live* male child was born, which, by the vigor of his movements and his cries, showed he was "all right."

I had been filled with anxiety lest the child should be born dead, on account of the prolapse of the cord; for it was not pulsating when down, and although replaced quickly, I was not sure that the circulation was still going on through it. But as there had been no hemorrhage indicative of any separation of the placenta, it was hoped and believed the child's vitality was preserved. Here, again, the knee-elbow position was of the greatest advantage, rendering the restoration of the prolapsed cord easy, and enabling me to disengage the presenting arm from its position and to press the head down into the superior strait, where, having once engaged, the labor was suddenly changed from the most difficult and dangerous to a safe and easy one.

A consideration of the mechanics of the knee-elbow position will show how it renders easy and possible obstetric operations that are otherwise difficult or impossible. In it the womb and its contents are passive, and free from all pressure from the superincumbent viscera and the action of the abdominal muscles, so that motion can be imparted to the child in utero, unopposed by the resistance of their compressing force.

In addition to the three cases mentioned, it has fallen to my lot to have had two more cases of arm presentation, making five in all, and the trouble and anxiety they gave me impels me to pay my mite of tribute to so invaluable a resource as the knee-elbow position for rectifying the presentation and rendering delivery safe and easy.—*New Orleans Medical and Surgical Journal.*

[From the Augusta Medical Journal of 1848.]

ELECTRO-PHYSIOLOGY.

THOUGHTS UPON THE ADAPTATION OF THE ANIMAL ORGANISM IN THE GENERATION AND MAINTENANCE OF THE ELECTRO-VITAL CURRENTS, ETC.

BY A. MEANS, A.M., M.D., D.D.

(*Continued from December number of this Journal.*)

According to the recently expressed views of the Professor of Pisa, the muscular currents, whose existence has been demonstrated, depend for their origin upon "the electric conditions which are produced by the chemical actions of the nutrition of the muscle"—the muscular fibre being regarded as the morphological element whose transformation, effected by the contact of the oxygenized blood, evolves molecular currents, which arising from a multitude of similar points united by a good conductor, and communicating with other points which have not undergone similar metamorphosis, may originate general currents. In this view, the "blood charged with oxygen, and the muscular fibre" become the elements of a pile, i. e. "the liquid and zinc."

But in the complicated organism of the human body, it is neither philosophical, nor necessary to the maintenance of the views which we urge, to limit the generation of electrical currents to one class of causes alone, and we are therefore warranted to admit their formation from any structural arrangement or vital action in the system, competent to produce them. This leads us to notice another law of our fluid.

3d. *It is known to be generated directly under the dominion of the vital principle, and by the exclusive agency of the living tissues, as in the torpedo and gymnotus electricus of Surinam, and to manifest all the striking results found from its action in the inorganic kingdom, as shocks, sparks, evolution of heat, chemical decomposition, deflection of a galvanometer and magnetism.*

The electro-physiological phenomena exhibited by these animals have utterly exploded the opinion that the presence of metals was indispensable to the production of voltaic electricity. Indeed, additional evidence of the fallacy of this dogma has been found in the electrical results which have followed from the lamellar arrangement of charcoal and plumbago; while by combinations of moist masses of animal and vegetable structure, as muscle and brain, beet root and wood, etc., the interesting truth has been established that, under given conditions, the organic kingdoms possess independent electromotive power.

Some valuable facts here call for our attention, derived from the recent critical and accurate experiments of Prof. Faraday, upon the Surinam eel, and from the report upon the voltaic power of the torpedo, made to the Academy of Sciences at Paris a few years since. First, that the membranous and columnar arrangement of their electric organs generate and retain large quantities of electricity, notwithstanding the diffused moisture of the whole interior and adjacent surfaces, and in defiance of the good conducting medium in which they move, which, in the case of inorganic generators, would lead to the speedy dissipation of the current, but here, as in the case of chemical affinities acting under the authoritative supremacy of the vital principle, we are furnished with another instance of complete and essential subordination of ordinary laws to the modifying and controlling powers of life.

Second. In the language of the report, "that the electricity, which produces the discharge, proceeds from the best lobe of the brain, and is transmitted by the nerves to the brain"—for in the experiments of the examining committee, the nerves, when tied, were found promptly to check the flow of the current, indicating, as they say, "in the nerve a peculiar molecular disposition for the transmission of the fluid," an opinion which finds support in the fact that the uninjured nervous trunks and filaments of every animal heretofore submitted to experiment have furnished it an instantaneous passage throughout the line of communication, but when in any instance bisected or crushed, refusing to convey it beyond the breach or laceration.

But again, within the present year, Prof. Liebig, in prosecuting his "investigation of the constituents of the animal fluids which are found without the blood and lymphatic vessels," has succeeded in demonstrating the existence of "free lactic and phosphoric acid in the whole organism, wherever muscle is found;" and what is still more strangely true, but corroborative of the views here presented, "in the animal organism, acids and alkalis are found separated by a membrane, constituting myriads of little galvanic circles, which, as such, must produce chemical and electrical effects." So that the long-repudiated doctrine of the acidity and alkalinity of the animal fluids, taught with so much eclat 190 years ago by the popular professor of the Leyden University, De le Boe Sylvus, however in that age misapprehended and misapplied, seems not to have been entirely chimerical.

Whether, however, this view be accepted or rejected, recent anatomical investigations, as reported by modern micogrophers, have disclosed the interesting fact that the construction of muscular fibre is almost exactly analagous to the electrical organs of fishes, consisting of longitudinal striæ and transverse discs, the latter being "perfectly rectilinear and the included spaces perfectly rectangular," and in the language of Matteucci, "it is very remarkable that with respect to the general circumstances of the two phenomena, the same laws preside over the discharge of electrical fishes and muscular contraction."

4th. *Inorganic currents pass with immense velocity along an unbroken conductor, and with greatest intensity when defended from lateral escape by the investment of a* NON-CONDUCTOR, *as silk or cotton thread, varnish, etc.*

The nervous tissue constitutes, unquestionably, the grand conductor or pathway along which this etherial agent effects its instantaneous and invisible passage to the remotest organs of the system, and the neuri-lemma or unctious theca which invests the tissue in its trunks and thousand ramifications, is, as we regard it, but a non-conductor, which seems designed to prevent an undue lateral waste of the passing current, precisely as the varnished cotton or silk wrapping secures greater certainty of transmission along copper wires. And in striking resemblance to such galvanic wires, every nervous filament is only covered in its passage, and left open at its cerebral and villous extremities. More remarkable still, each filament in every fasciculus or bundle of nerves issuing from the brain, has its own separate theca or membranous coat, as if to prevent confusion in the transmission of the neuro-voltaic currents, and secure, unexpended, their appropriate electro-force to the respective points of distribution. In further accordance with these views, it is an imposing fact that adipose matter, a bad conductor,* in the language of Richerand, "covers and surrounds the extremities of the nerves, diminishing their susceptibility, which is always in an inverse proportion to corpulency"—a beautiful arrangement, and admirably adapted to guard against too rapid an escape of this energizing fluid from the fine filiform extremities of these delicate conductors, and to reserve it for the functional demands of the various organs.

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*And hence tallow is employed to retain amalgam upon the rubber of our electrical machines.

"In fact," adds this eminent physiologist, "it is observed that persons subject to nervous affections constantly join an extreme leanness to an excessive sensibility," accompanied, too, as our experience authorizes us to add, with functional derangements and general constitutional debility, the electric waste being thus made to exceed the electric supplies necessary for the maintainance of hygienic action. Indeed, the law of insulation, or electro-retention, seems to be preserved throughout the animal economy. The organs of secretion, over which the distinguished Marshall Hall predicted that electricity would exercise an extensive influence, and which has since been so ably and satisfactorily verified by Dr. Wilson Phillip and others, are generally found with non-conducting investments. The liver is surrounded with the membranous and lubricated linings of the abdominal cavity in front, and the oleaginous surface of the viscera and the hepato-gastric omentum in the rear. The kidneys are literally immersed in adipose matter, while the mammary glands are liberally supplied with a thick tunic of the same insulator. These may be regarded as but interesting specimens of that electric precaution which nature has manifested in regard to glandular stuctures generally. The same defensive measures have been adopted for the circulatory system.

As, in the calibre of the sanguiferous tubes, chemical changes and consequent electric evolutions are perpetually going on to supply animal heat, and for other vital purposes, it would seem extremely appropriate that lateral radiation should be prevented by sufficient non-conductors. Now, in accordance with this anticipation, the great central organ, the heart, is always containing blood in a highly positive condition—ever fresh from the re-oxidizing region of the lungs—is encompassed by fatty and membranous textures, while, in the language of the author already quoted, "adeps is found in great abundance in the direction of the blood vessels." Yet with all this delicate conformity to electric law, there must occur in its passage a diffusive expenditure of the fluid, which, it would seem, should be compensated by timely accessions from some adequate source.

In the construction of our telegraphic lines, it is well known to electricians that the length of the wire determines the strength of the battery. As the first is extended, the second must be increased to allow for lateral waste or defective conduction, and if the route be continued beyond a convenient distance, re-lay batteries must be interposed at intervening points to reinforce the waning current.

Now, may not the mysterious ganglionic system, that puzzle of all former physiology, be intended as a series of relay batteries, stationed along the nervous routes to re-supply the partial exhaustion and maintain the normal momentum of the electric forces? And to give plausibility to this suggestion, it must be remembered that these multiplied nervous centres generally occur in the neighborheod of the large secreting organs, and where electro-vital accumulation seems to be most demanded.

It is interestingly true, and to some extent an entirely analagous arrangement, that in the electric organs of the torpedo, which consist of from four to five hundred parallel prisms, each separated by transverse diaphrams with intervening cells, each containing water, albumen and chloride of sodium, the nervous distribution is abundant and peculiar, "forming a great number of closed circles, each of which has one (nerve) in the cerebral lobe, and another in the wall of the cell of the organ."

Indeed, dissections of the torpedo and gymnitus show that the ganglia and nerves of their electrical apparatus exceed in extent all the rest of the nervous system put together. "The analogies," says Matteucci, "between muscular contractions and the discharge of the torpedo are complete; everything which destroys, augments or modifies the one, equally effects the other." The shock which it communicates is decidedly a voluntary act, and so completely under the control of the will, that it can at pleasure discharge either the whole or a part of its organ.

In this class of animals we have, beyond question, the nervous power converted into electric force; and why may not the converse be true, viz., that electric force may be transformed into nervous power? The reciprocal generation of distinctive phenomena, both in the inorganic and organic kingdoms, all clearly traceable to a community of agency, and indicating throughout the presence and control of electric currents, modified only by the organization, the condition or the circumstances of the bodies through which their manifestations are made, may be regarded as settled results in science. To illustrate: In the inorganic universe, electricity produces chemical action, and chemical action, in return, evolves electricity. Galvanism (only another form of the fluid) generates magnetism, and, conversely, magnetism originates powerful galvanic currents. Again, galvanism produces caloric, and caloric reciprocally sets in motion strong thermo-electric currents, capable, even in the laboratory, of producing results identical with those of galvanism, as shocks, sparks and magnetism. But this correlation of physical forces, or convertibility of power, is to be found in the vegetable kingdom also. Plants are now known, through the activity of their vital forces, to throw off immense quantities of electricity during the progress of healthy growth, while electrical action, in return, has exhibited effects almost magical in rapidly developing all the phenomena of vegetable life. Now let us ascend to the more complicated structure of the animal kingdom, and when it is incontestibly established that in the case of electric fishes nervous power is converted into electric force, why should it be regarded either unphilosophical or improbable—nay, are we not constrained to expect that electro-dynamic manifestations should be the result of nervous power? or, in other words, that under the laws of animal life they are convertible forces?

While the Tuscan professor does not consider the *vis nervosa* to be identical with the electric current, he is commendably guarded in detailing the result of his experiments. When attempting to deflect a galvanometer by exciting irritation in the nerve of a living animal, he says, "I must confess that whenever the experiment was well made, I never obtained evident and constant traces of the electric current." Again, in endeavoring to effect the same thing by the aid of a helex, he adds, "I never observed constant signs of the induced current in the spiral." Upon the subject of neuro-electric currents, therefore, we must still regard the affirmative results of the experiments of Dr. Prevost, of Geneva, in 1848, sustained subsequently by those of Prof. Zantideschi and Dr. Favio, and hereafter referred to in this article, as uninvalidated. But it has been objected that when a nerve is ligated, the parts beyond the ligature upon which it is distributed cease to feel or act under the determination of the will, while an electric current, sent along the same nerve, passes to its extremity and exhibits its characteristic effects upon the contractility of the muscular fibre, and that therefore electricity is not identical with the neuro-vital power. Now, it does seem to us that a fair and ingenuous admission of existing laws, and all the facts involved, would very much weaken if not entirely remove the force of this objection, however honestly suggested or honorably maintained. First, then, let it never be forgotten that those physical laws which ordinarily regulate and govern the elements of inorganic matter, are at once modified, suspended or abrogated when those elements are transferred to the dominion of life and made subordinate to its higher control, and the very same agent which, beyond the powers of life, was characterized by certain and unchanging indications, when marshalled within the circle of vitality, is seen under new aspects and often capable of higher results, while its identity remains undoubted. Mark the peculiar and complex combination of the simple substances, oxygen, hydrogen, carbon and nitrogen, in inorganic compounds—the multiplicity of the atoms employed, and the diversity of their chemical aggroupments in constituting such forms of matter as sugar, starch, muscle, tenton, cartilage, etc., etc., and that just as soon as the vital principle has fled and the unrestrained play of inorganic affinities commences, these compounds are suddenly resolved into their elements, which again instantly reunite under new atomic arrangements in the formation of water, carbonic acid, ammonia, etc. Witness, also, the suspension of the ordinary laws of caloric in the uniformity of animal temperature, whether at the equator or the arctic circle—under a heat of 352 degrees Farenheit with the "oven girls of Germany," or in the bleak atmosphere of the mariner in the polar seas at 50 degrees below zero Farenheit.

Now we have only to suppose that vital currents are graduated in their momentum to suit precisely the exceedingly delicate tissue which they are designed to traverse, viz., the pulpy or fluid matter invested by the neuri-lemma, and that the normal electric impulse is too feeble to pass the obstruction and put in motion the molecules beyond, while an artificial current will pass over a breach of continuity, even in wire, to make its circuit.* This fact seems to have modified the views of Prof. Matteucci himself, in his examination of induced currents, and after having ascertained that " very feeble electric discharges," whose presence could not be detected "either by the galvanometer or any other instrument," produced contractions in frogs. He tried such weak discharges from a Leyden jar upon a galvanoscopic frog, and admits that after "a great number of endeavors," he could discover no difference between the inductive effects of such currents and those produced by the normal muscular currents of the animal. Before closing our remarks upon this department of our subject, we cannot forbear calling attention to the very recent anatomical discovery, that the muscular fibres are directly continuous with the tendonous fibres in which they terminate, and that the sarcolemma, or superficial investment of the muscle, stops abruptly short at the junction of the muscle with the tendon. In this arrangement, therefore, we have "some reason to consider the tendon as having the same electrical state as the interior of the muscle, so that by establishing, by means of a good conductor, a circuit between the tendon and the sarcolemma which covers the muscle, we put in circulation a portion of the muscular current already proved to exist."

5th. *The phenomena of electricity are only manifest when the electric eqilibrium is disturbed and then restored by instituting a current between the positive and negative surfaces.*

Now the most recent and thorough investigations in neutrology authorize us to believe in the circulation of electro-vital currents along this sensitive line of conductors, giving strong indications of conformity to the above law of the inorganic fluid. To adopt the language of a distinguished member of the Royal Academy of Medicine in Paris, (Dr. Husson) "the structure and functions of the nervous system have of late become the study of physiologists; and the opinions of Reil, D. Autenreith and M. D. Humbolt, as well as the recent works of M. Bogros, seem to place beyond a doubt not only the existence of a nervous circulation, but also the exterior expansion of this circulating fluid—an expansion which takes place with such force and energy as to create a sphere of action that may be likened to that in which we observe the action of electricity." These views receive further support from the researches of Prof. Zantideschi and Dr. Favio, who assert the existence of two sets of neuro-electric currents—one superficial, and going towards the cerebro-spinal axis, the other more deeply seated, and going from that axis to the surface. Now, should the superficial or returning current not be traceable by any tests now at our control, we are fairly authorized to infer its existence from a recently discovered fact in telegraphic electricity, viz., that it is only necessary to make provision for the outgoing current along a single wire, and by allowing the extremities each to come in contact with the ground, though fifty miles apart the returning current effects its invisible passage along the earth to its point of exit—faithfully completing its electric circuit after having performed the task assigned it. But infallibility to establish the existence, not only of currents, but voltaic currents along the nervous cords, we must refer to a fact which finds its anologue in another law of the fluid in its inorganic manifestations.

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*In connection with the explanation, however, it must be recollected that by Prof. M's experiments on an insulated nerve ligated the current was "weakened and more feeble" in its manifestations below the cord.

6th. *A current passing under given circumstances at an angle of about* 90 *degrees from a soft iron bar, instantly converts it into a magnet.*

The capability of our fluid to generate magnetism is too well known to require illustration here. Now the interesting experiments of Dr. Prevost, of Geneva, as reported by M. De la Rive to the French Academy in '38, clearly settles the existence of such currents, for Dr. P. "succeeded in magnetizing very delicate soft iron needles by placing them near to the nerves and perpendicular to the direction which he supposed the electric current took. The magnetizing took place at the moment when, on irritating the spinal marrow, a muscular contraction was effected in the animal."

7th. *Electricity enters and escapes from pointed conductors with great facility.*

We see an obedience to this law interestingly exemplified in the animal phenomena of taste, absorption, etc. To the pen of that great physiologist, Sir Charles Bell, we are indebted for an accurate and graphic description of these delicate processes, given, it is true, without any apprehension of the conclusions to which his anatomical testimony might lead. He says, "the papillæ, which are the organs of taste, are to be seen on the point and edge of the tongue, and consist of a pretty large, vascular soft point, which projects from an opaque, and white sheath. If we touch one of these papillæ with the point of a brush" (dipped in vinegar) "and at the same time apply a magnifying glass, it is seen to stand erect and rise conspicuously from its sheath, and the acid taste is felt to pass backwards to the root of the tongue." The simple rationale of this process may be thus enunciated, viz., the acid, being a negative electric, excites the positive electricity of the nervous villi, and attraction and erection are the natural consequences, as the applied finger produces the extention of cotton fibres upon a charged prime conductor. Our time forbids the further prosecution of these interesting examinations, and we must only remark that Sir Charles Bell's detail of the apparatus and process of absorption furnishes to our minds satisfactory proof of the electrical character and action of the lacteals and lymphatics. The "lanuginous surface" of the intestines, the "small filaments" which are seen by "a magnifying glass," projecting from the surface "like hairs," when stimulated by the negative contents of the bowels, and then "erected" in the act of absorption—all speak plainly the electric nature of this process.

8th. *Electricity expands fluids without chemical change and increases the velocity of their motion through capillary tubes.*

A fluid passing by drops from a capillary orifice, as soon as electrified by contact with a charged conductor, flows in a fine but rapid and continuous stream, until the communication is broken. May not this agency be the primum mobile of the circulation in the proper capillary tubes, forming the anastomosing net-work between the veins and arteries? for it seems to us, from the minuteness of their calibre and the ordinary density of the blood, it is impossible satisfactorily to account upon any other received hypothesis, for the constant and speedy movement of that fluid in the remote quarters.

9th. *Curved or spherical surfaces retain accumulated electricity best.*

This great law of our fluid is regarded in the cylindrical form and rounded extremities of every prime conductor and the globular knob of every Leyden jar, and yet it is strange that no writer with whom we have met seems to have recognized a conformity to it in the general contour of the human body. The undulating outline and beautiful rotundity of the human figure, have sprung the imaginations of enraptured poets and furnished a theme for adoring lovers; rhetoricians have lectured upon the purity of taste and philosophized upon the "curved line" and the "line of beauty," but it seems never to have caught the observation of poets, lovers or rhetoricians that man was shaped for the material world in which he moved, and in conformity with the great physical laws which control the elements within and around him. Our tastes are given us by a benign Creator to meet the circumstances of our being and administer to the pleasures of life. But had Heaven so constituted these tastes, the pleasing emotions which are now excited by the gentle curve of Beauty's cheek and the graceful ronudness of her sylph-like form, would have been characterized by equal intensity had that cheek stood out a triangle and that form an obelisk.

Was not, then, the great design of our external conformation to give additional security against an excessive discharge of this vitalizing fluid? Surrounded, as we are, on every hand and at all times by an aereal medium, often transformed by suspended moisture into a rapid absorbent of electricity—a fluid so indispensable in its control over the animal functions, special guards seem to have been thrown around this exalted sphere of its action. Besides, the nervous sheaths, the sanguiferous tubes and the oleaginous accompaniments of both, the exposed outposts of the system are fenced in by a general subcutaneous expansion of adipose tissues—itself surmounted by a final and admirably insulating investment, in the squamous cuticle which strictly conforms to electric laws in its curvilinear adaptation to the whole corporeal surface, and is supplied by an oily secretion which, while indispensable to healthy existence, is nevertheless constituted a negative electric to facilitate the accomplishment of the same grand end. Many warm-blooded animals whose position in the scale of being requires that they should be almost constantly immersed in water, as the whale, seal, walrus, etc., are protected against undue electrical exhaustion, and consequently from an abnormal reduction of temperature, even in the conducting medium through which they move, by immense masses of non-conducting unctious matter which surrounded the whole body to a considerable depth under the cutis vera. It is an interesting and relevant fact which chemistry has recently disclosed, that the horny texture of the epidermis is not only in chemical composition nearly the same, but in non-conducting power precisely similar to hoofs, hair, horns, nails, claws, wool, etc., and is completely represented (where, according to our view, its insulating presence is demanded) in the corneous covering of the epithelium which lines the inner surfaces of the blood and lymph vessels, of the intestinal canal and the passages from most glands as well as the mucous membrane of the lungs. The extremities of animal bodies therefore, and those parts approximating most to points, are, in accordance with the same design, guarded by insulators. Hence the beautiful adaptation of the hoofs and horns of quadrupeds, the talons and beaks of birds, etc., to effect the high purposes of Nature.

The very instincts of mankind seem to have led them, in many instances, to the adoption of habits conformable to the action of this law. Nor is this remark limited to civilized more than to savage life. Artificial heat, by drying the air and the cutaneous surface, conduces largely to electrical retention, as well in the rude hut of the Laplander, as the costly parlor of the American. So do the greasy skins, furs and feathers of the Indian tribes, and even the rancid and offensive fish oil with which the New-Hollander besmears his body, while the enlightened civilization of cis-and trans-Atlantic states, affects the same object in the non-conducting textures of the cottons, linens, woolens and silks, with which they are clothed. The same instinctive conformity to the inflexible habitudes of our fluid, may be found in the sleeping arrangements of both savage and civilized life. For while the organic electricity of the Western Indian is preserved upon his buffalo and bear-skins, and that of the wild Polynesian upon his dry grass and mats, the Asiatic reposes electrically safe upon his muslins and silks and hair matresses, and the European and

American upon their cotton stuffs, blankets and feather-beds. In accordance with these views, the health and longevity of our race must be materially affected by the moisture or dryness, and consequent electrical condition of the atmosphere. Hence on the lofty table lands of Mexico, 8,000 feet above the level of the sea, and amid whose pure, and dry, and transparent air, the moon is seen as a sheet of silver, and the stars as burnished gold, embossing a vault of Lapis Lazoli—human life, according to the testimony of Humboldt and Murray, is frequently extended to the long period of "one hundred years, and is still green and vigorous;" while, according to the same testimony, down the slopes extending to the sea, "where humid winds and frequent fogs prevail," and where corporeal electricity is therefore rapidly absorbed and lost; the air is almost fatal to human life. Here we are furnished, too, with a satisfactory explanation of the deleterious consequences resulting from exposure to damp sheets or garments, and especially in the case of invalids or enfeebled constitutions, where the electro-generative forces are weak, and unable to compensate for the waste by absorption—hence functional derangements rapidly supervene.

Suffer us now, after having traced this parallelism of electrical action between inorganic and organic, inanimate and animate matter, briefly to refer to some facts within reach of most observers, illustrative of the control which the electric current exerts over the excitability of the nervous tissue and the functional phenomena dependent upon its action:

1. It increases, under appropriate polar arrangement, the peristaltic motion of the entire intestinal canal.

2. A galvanic line of communication established by a conducting wire and terminal plates, between two slightly excoriated surfaces on the human body, soon presents, under the positive pole, active inflammation, excess of nutrition, and if kept within conservative bounds, a rapid restoration of the parts; while the negative surface indicates an enfeebled vitality, deficiency of nutrition, and an approrch to gangrene and mortification.

3. The circulatory salts of the human body may be decomposed at the cutaneous surface, by a similar arrangement—

the acid collecting at the positive pole and the alkali at the negative—each being indicated by its peculiar characteristics.

4. Neuralgic pains have often been relieved by the passage of a thunder storm—a phenomenon for which a rational solution is only to be found in the fact that the changed electrical condition of the atmosphere had effected a disturbance in the electrical equilibrium of the system, producing, perhaps, abnormal and irregular circulation of the neuro-electric currents, a state of things which was at once relieved, as soon as the atmospheric balance was restored by the discharged clouds.

5. Cases of hemiplegia and other paralytic affections have often found essential relief from the application of electric fluid in some of its forms. Under the generating power of a large electro-magnet and revolving armature I have seen a case of paralysis of the muscles of the eye, cheek, lip, etc., entirely relieved, after a few applications of fifteen minutes each, which had resisted the ordinary treatment for several months previous.

6. Irregular and spasmodic actions in the limbs or joints, dependent, as we suppose, upon the disturbed electro-vital currents which traverse the system, will frequently find a remedy in the use of a similar instrument. My esteemed colleague, in the chair of surgery, has kindly furnished me with a case of spasmodic contraction of the flexor muscles of the knee-joint, which yielded to the first application of a moderate magneto-electric current.

7. The beautiful and careful experiments of Broussais show the control of the electric fluid over the processes of absorption and deposition. He speedily generated a milky cataract in the eye of a pig, by introducing into the crystaline lens a fine copper wire, connected with the negative pole of an active galvanic series, and two weeks afterwards as speedily removed it by reversing the poles.

8. Satisfactory experiments by Dr. Wilson Phillip, and since, I believe, "publicly tested in most of the medical schools of Europe," have shown that respiration and digestion can, for some time, be carried on after the bi-section of the pneumogastric nerve, which so largely controls these functions, by sending a positive electric current through the pulmonary and gastric segments.

From our acquaintance, then, with an agent so prompt and powerful in its control over the sensibilities and functions of the animal organism, may we not, hereafter be able intelligibly to trace the *methodus medendi* of many remedies, and the rationale of certain pathological phenomena heretofore enveloped in perfect mystery? Does not *acu-puncturation*, formerly employed more extensively than at present, in cases of cephalagia and rheumatism, owe its curative efficacy to the conducting power of the inserted needles, which convey silently off the excess of electricity collected in the part? Again, may not the etiology of malarious and contagious diseases, which has long lain in profound and unapproachable obscurity, be more satisfactorily explained by admitting the agency of electrical affinities than upon any other hypothesis? The human blood, in a normal and healthy condition of the system, is in a positive state, which is constantly maintained by the activity of the generating sources within—an excess generally passing off in silence from the cuticular surface, so that out of 356 experiments made by Mr. Hemmer, of England, upon the "uncovered skin," 322 indicated the presence of positive electricity. This surplusage of the fluids upon the surface, we believe to be indispensable to the healthful condition of the whole animal economy, and that when, from any cause, it is diminished or ceases, diseased action ensues. I have just received an interesting communication from Mr. D. Ruggles, a blind man, of Northampton, Massachusetts, who has, for years, been able to determine upon the character of diseases from the electrical manifestation furnished by the skin to his acute sense of touch. "These symtoms," says Mr. R. in his letter to me, "vary in healthy persons and in invalids; in the former I can feel a regular emission of what I believe to be electricity, from the pores of the skin in any part of the body, and especially near the wrists; in the latter this symptom is feeble and often intermitent, and in some individuals it is not perceptible." He then gives in detail the peculiar electrical states exhibited in several different diseases, as detected by sensation.

Now, by the testimony of the best authorities to which we can have access, it may be regarded as certain that the pestilential exhalations which escape from animal putrefactions, vegetable decompositions, etc., and, indeed, all the ascertained causes of epidemic and infectious diseases, are in an electro-negative condition, and when the human body is surrounded by a highly charged negative atmosphere, instead of the naturally positive state of dry and pure air, the result must be the rapid absorption and exhaustion of the positive corporeal supplies, until the electro-vital resistance is overcome, and functional aberrations supervene. May we not in this way largely account for the ennui and lassitude so commonly experienced in a damp atmosphere, where the conducting power of the medium too rapidly carries off the organic currents, and thus superinduces a general enervation, the barometrical column, in the mean time, indicating too little reduction in atmospheric pressure to have produced such deleterious effects upon the animal sensibilities?

Once more: we believe that the true pathological distinction between the chronic and acute forms of rheumatism will be found to depend upon the electro-negative condition of the parts in the former, and their electro-positive states in the latter—the curative applications plainly appropriate in the one, being contra-indicated in the other. The high inflammatory action, arterial turgescence, florid surface, and great pain in acute articular rheumatism, giving evidence of the positive fluid, which is but increased by stimulating applications, warm covering etc., and attended by an aggravation of the prevailing symptoms, and which can only be successfully treated by withdrawing a portion of blood, (electro-positive) by venesection or otherwise, the application of negative-electrics, as vinegar, anodyne lotions, etc., and thin investments around the joint; or, in short, by such remedies as will discharge the excess of the positive fluid. Whereas in the chronic form, the absence of capillary engorgement, heat, redness, etc., and an abatement of pain from warm covering, indicate a minus condition of the part, and require that the electric equilibrium should be restored by favoring the accumulation of the positive fluid, by warm poultices, flannel or silk bandages, or other non-conductors. In accordance with these views, therefore, in acute rheumatism, or an electro-positive condition of the part, allow us respectfully to suggest the use of a flexible metalic bandage, or strips of tin-foil upon linen, studded thickly with metalic points, directed outward, which may be readily prepared by driving small tacks through the bandage, and applying their heads towards the cutaneous surface, keeping the whole moist, in the mean while, by embrocations of tobacco and vinegar, or other negative electric.

Lastly: The singular phenomena attendant upon etherization, or the use of trichloride of formyle, (chloroform) which belongs to the same class of volatile fluids, for which we have yet seen no plausible philosophical solution, may be fairly traced, we think, to the electrical affinities at play in the pulmonary organs and the sanguiferous channels, and directly affecting the whole nervous tissue. The views here inculcated, it must be remembered, recognize all sensation and motion, as dependent upon nervous energy, and the latter as only maintained by the presence of electric currents. Now we have tested by repeated experiments, that the vapor of sulphuric ether is always negative in the presence of a positively excited body, and when freely inhaled it posses readily by inhibition, through the mucous lining of the air-cells into the circulating mass of blood, whose normally positive condition is rapidly reduced, until the supply is inadequate to maintain the integrity of functional action in the sensiferous nerves, and consequent insensibility follows. If the inhalation is continued, the motor system of nerves next lose the necessary amount of electrical stimulus, and the whole muscular tissue is relaxed, and voluntary motion suspended; and, if persevered in too long, the involuntary motion of the heart, arteries, etc., cease from the same cause, and death ensues. When, however, moderately administered, spontaneous restoration may be expected from a re-supply of the positive fluid, furnished by the still active electro-motive resources of the system.

Some experiments recently made by M. Ducros for the purpose of determining the efficacy of electricity in recovering inferior animals from the effects of inhaled ether, and published in the August number of the London *Lancet* greatly strengthen our opinions as to the rationale of letheonization. M. Ducros states, " that the phenomena produced by the vapor of ether on chickens and pigeons last from seven to eight minutes; but if these birds, when thus under the influence of ether, are submitted to the action of electricity by placing them on the isolating stool, and allowing a current of positive electricity to pass into them, they recover from their insensibility in about thirty seconds. If they are placed on the electric conductor, they are aroused in ten seconds; and if they are placed at the extremities of the conductors, and thus made to receive electric shocks, their vigor is instantly restored. When submitted to the action of the simple apparatus of Clarke, the electro-magnetic current is equally instantaneous in effecting their restoration. The influence of the negative electricity, instead of abridging the insensibility, appears to prolong it."—*Comptes Rendus and Medical Gazette.*

Editorial.

ILLEGITIMATE ADVERTISING.—Justice to the readers of medical journals requires that the pages devoted to reading matter should not be occupied with articles laudatory of the preparations of particular manufacturers. We are occasionally presented with such articles for the JOURNAL. While we desire to furnish our readers with all that is new and useful in medicine, we do not think the description of articles referred to, afford advantages to physicians, while they work injustice to other manufacturers of the same articles, who pay for their page in our advertising department. Well-meaning, honorable physicians, who have tested preparations sent them for the purpose, are induced by the donor to write approvingly of the particular manufactory from which they were sent. Such communications seem not to be objectionable, but if accepted indiscriminately by journalists, their original department would soon be filled with articles laudatory of particular pharmacists, affording no practical benefit to physicians. We have, therefore, refused articles of this kind from good medical writers proposing to make regular contributors, but who, we have reason to believe, are paid by manufacturing druggists to make the articles so as to serve as useful advertisements. Now, while we think reliable and faithful pharmacists, affording active, efficient preparations, should be encouraged by making them notorious as such, we think a hired laudator is not the proper person for this business. All our advertisers, so far as we know, have an equal claim upon our confidence, and we cannot, with propriety, and with justice to the medical profession and dealers in medicines, advise a preference, nor allow the JOURNAL to be made the medium of such advice from others. Our duty being first and greatest to our medical readers and their suffering patients, we feel bound to expose any fraudulent preparation likely to prove injurious, and also to express our opinion of new remedies and their preparations, or new preparations of old remedies, by whomsoever discovered or invented.

While we probably could not justly say that there should be any preference for the same alkaloid, or its salts, as prepared by different pharmacists, yet the comparative value of various alkaloids, or the several salts of any one, may afford a practical subject for discussion and interchange of opinion. For example, quinine, salicin, etc., are equally reliable from any respectable pharmacist, but the comparative value of quinia, cinchonia and cinchonidia, whether each be the preparation of different manufacturers or not, is a subject upon which all should express their experience and preference, without regard to the originator or vender of the articles.

PATRONS OF THIS JOURNAL will please remember that all business connected with subscriptions and advertisements should be arranged with the Publisher, H. H. DICKSON, and all communications furnishing reading matter for the JOURNAL should be addressed to the Editor.

WE have received from Washington the following notice of the sixtieth anniversary meeting of the Medical Society of the District of Columbia:

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA—*Interesting*

Celebration of the Sixtieth Anniversary.—The Medical Society of the District of Columbia assembled Thursday night at Marini's Hall, which was well filled. The occasion was to celebrate the sixtieth anniversary of the society. Dr. Toner, as chairman of the committee of arrangements, in announcing the programme for the evening, made, in substance, the following remarks: The Medical Society of the District of Columbia was founded September 26, 1817, and this meeting, therefore, represents the sixtieth anniversary—a period of time which represents two generations of human life. Our first charter was obtained from Congress in March, 1819. The District then embraced the original ten miles square, with the three cities, Washington, Georgetown and Alexandria, the whole population being but little over 30,000, There were twenty-one physicians named in this charter, all of whom are now deceased, and they included nearly all the medical men then practicing in the territory named. I use the term our charter, because we are now acting under a revised and amended act of incorporation, granted July 7, 1838. In our present charter there are named twenty-two physicians, but the nearly forty years that have supervened since that time has removed from earth all but seven of our honored and worthy representatives. The names of those living are Doctors J. B. Blake, Joseph Borrows, H. F. Condict, J. C. Hall, Benjamin King, Harvey Lindsley, and Noble Young. Of these, two—Drs. J. B. Blake and J. C. Hall—have been physicians for over fifty years; and Drs. Joseph Borrows, Harvey Lindsley and Noble Young will have been physicians fifty years next March. All these physicians are as familiar to the citizens of Washington as household words, and have been particularly blessed with length of days and professional usefulness beyond the average allotted to medical men in the United States; the average life of physicians being but about fifty-eight years. The average years of professional life in America is 32½ years; and the average age at which physicians commence to practice is between twenty-five and twenty-six years. From the formation of our society in 1817 to the present, there have been about 450 names enrolled as licentiates of this society. Of these about 180 survive, and are more or less actively engaged in practice. Without further prefatory remarks, I proceed to the discharge of the agreeable duty assigned to me, of presenting to you an old and highly esteemed member, who has consented to be the orator of the evening—Dr. A. Y. P. Garnett.

Dr. Garnett opened his able and interesting address with a reference to the rapid progress of the science of medicine, due mainly to the organized efforts of the profession, particularly such organizations as this. He gave a rapid glance at the history of medical practice and schools of medicine, ending with a highly interesting account of the straits to which the Confederate surgeons and physicians were reduced during the war by the enforcement of the federal blockade, which partially deprived them of their supplies. The physicians, cut off from their accustomed vegetable drugs, substituted indigenous plants with great success. He complimented them for successfully battling with the emergency, and also complimented the surgeons for devising new methods of practice, made necessary by the blockade, particularly Prof. Campbell for a valuable discovery, which he described. He closed with a tribute to the present high character of the profession generally, and the improvements in the science of medicine due to them.

BIBLIOGRAPHICAL.

GUIDE TO THERAPEUTICS AND MATERIA MEDICA. By Robert Farquharson, M.D., Edin, F.R.C.P, London, Lecturer on Materia Medica, etc. Enlarged and adapted to the United States Pharmacopœia by Frank Woodbury, M.D., member of the Academy of Natural Sciences. Philadelphia, Henry C. Lea, 1877.

The novel arrangement of this work certainly gives it attraction which it would not otherwise possess. We confess that a feeling of more than the usual interest in ordinary compilations is elicited on this and other accounts. The author, unfortunately, thinks a purely physiological classification impracticable, because some remedies produce more than one action, thereby requiring, in such arrangement, the same article to be placed in different classes. On account of the confusion which the author thinks might thus arise, "it has been thought best to adopt the arrangement of Garrod and other popular text-books." It may be truly said, also, that authors and publishers do not wish to risk the popularity of new works by decided innovations in arrangement or anything else, even should they think them preferable.

A peculiar and attractive feature of the book consists in the arrangement of certain classes of remedies, so as, on the same page, to have a column each for the indications to be filled by the class, and the particular means used for the purpose. Twenty-two pages are thus occupied with the consideration of the following classes, in alphabetical order:

Antidotes, acids, anthelmintics, antipyretics, antiseptics, counter-irritants, diaphoretics, diuretics, emetics, emmenagogues, expectorants and purgatives.

The second part consists of over three hundred pages, occupied with individual "remedies comprised in the primary list of the United States Pharmacopœia," alphabetically arranged. The same arrangement of double column is also observed in this department of the work—one for the physiological action, the other for therapeutical results. This is a beautiful arrangement and strikes us as eminently practical, provided we have a particular remedy we desire to use, and wish to know what action may be expected from it. Convenience might have been better served, it is true, by having the class of actions tabulated, as in the first part of the work, and the articles arranged under such headings; for it is expected we always know what action is required before the remedy to produce it is sought. We think, therefore, while the plan is very nice, and affords a decided improvement on a majority of the works on therapeutics, that if all the remedies had been systematically noticed, as in the arrangement of the first part of the book, under the proper heads of classes, interest in it would have been increased greatly.

We are pleased to receive the work from the publisher, and would advise it as an addition, by all means, to the less useful works on this subject to be found in the libraries of physicians.

THE ACTION OF MEDICINES. By Isaac Ott, A.M., M.D, formerly Demonstrator of Experimental Physiology, University of Pennsylvania. With twenty-two illustrations. Philadelphia: Lindsay & Blakiston, 1878.

This octavo volume of 164 pages contains more useful instruction than can be found in half a dozen large volumes of new publications we have seen. The author seeks to promote advancement in therapeutics by a more thorough knowledge of the physiological action of remedies. This is certainly the correct method, and his efforts will be appreciated by the student of acology and therapeutics.

The time has passed for the books of routinists to be viewed as undoubted authority for the administration of this and that medicine for the cure of particular diseases, without an intimation of the action produced by the remedy. The time of formularies and recipes is passing away. They are not now acceptable to correct medical thinkers.

In the work before us the author gives instruction in experimental study of the physiological action of medicines on inferior animals; in the physiology of the nervous and circulatory systems, and in the comparative physiological action of remedies on man and inferior animals, with their therapeutic results in disease.

While the work does not form a complete text-book for the action of all remedies in use, the author has accomplished all he proposed, and has furnished a book which should be read and studied by all lovers of rational medicine.

A thorough text-book on materia medica and therapeutics must necessarily contain all the medical substances in common use, whose physiological action is known, and a description of the action had by a medicinal dose. This course has not been pursued by the author, nor was it his purpose to do more than he has accomplished.

THE ELEMENTS OF THERAPEUTICS. A CLINICAL GUIDE TO THE ACTION OF MEDICINES. By Dr. C. Binz, Professor of Pharmacology in the University of Bonn. Translated from the fifth German edition and edited with additions, in conformity with the British and American Pharmacopœias, by Edward I. Sparks, M.A., M.B., Oxon, member of the Royal College of Physicians, of London, etc., etc. New York, Wm. Wood & Co. 1878.

The book is made up of twelve chapters, each giving the action and uses of the remedies belonging to a particular class. The classes mentioned are: Nervous sedatives, nervous stimulants, ætherial oils, demulcents, astringents, plastics, diathetics, antiseptics, antipyretics, evacuants, cauterants and mechanical agents. Each particular remedy associated in the respective classes is not elaborately, though sufficiently, described, and the physiological action, dose, etc., given in regular order.

This is intended and answers for a text-book of materia medica and therapeutics. Although the classification does not strike us as the very best, yet so very much in advance of some others that we must advise its perusal by students and practitioners. The actions attributed to various agents are not in accordance with our opinion of them, yet as gross errors have been indulged for a century past in this particular, we are pleased to see a change, and shall not attempt their refutation.

OUTLINES OF MODERN CHEMISTRY, ORGANIC, BASED IN PART UPON RICH'S MANUEL DE CHIMIE. By Gilbert Wheeler, Prof. of Chemistry in the University of Chicago, and formerly Prof. of Organic Chemistry in the Chicago Medical College. Jansen, McClure & Co. 1877.

This volume of 220 pages treats of organic chemistry exclusively, as the title indicates. It is not, therefore, a thorough work on the general science of chemistry, but more practical and useful for the study of the department of chemistry of which it treats, than any general treatise on chemistry with which we have met. To such students of chemistry, then, or medical men, as wish to peruse a work exclusively devoted to the action and reaction of purely organic substances, we recommend this book. Vegetable or organic acids, alcohols, ethers, alkaloids, etc., are particularly alluded to, and in an interesting manner.

THE EAR; ITS ANATOMY, PHYSIOLOGY AND DISEASES. A Practical Treatise for the use of Medical Students and Practitioners. By Charles H. Burnett, A.M., M.D., Aural Surgeon to the Presbyterian Hospital, etc. Philadelphia; Henry C. Lea. 1877.

This is a new work of 600 pages, and is, doubtless, an exhaustive treatise on otology. Having been received too late for perusal in order to be able to write more at length of the book, we can only say, from a glance over its pages, that we have not been more pleased with the appearance and arrangement of subjects than in this. We are pleased, also, to see this evidence of sufficient ability and energy at home to supply the demand for standard works on special or general subjects, without republication from European authors, because of their popularity twenty years ago.

How to Use the Ophthalmoscope. Being elementary instructions in Opthalmoscopy, arranged for the use of students, with thirty fine engravings. By Edgar A. Browne, Surgeon to Liverpool Eye and Ear Infirmary, etc. Philadelphia; Henry C Lea. 1877.

This is a duodecimo volume of 120 pages, with splendidly executed plates, and, taken altogether, makes a very fine appearance for so small a book.

EDITORIAL CORRESPONDENCE.

Fulton, Ark., Jan. 17, 1878.

Editor Atlanta Medical and Surgical Journal:

I have noticed with a great deal of interest an essay on belladonna, with theoretical remarks as to its *modus operandi* published, in the last issue of the Journal. There are in it many ideas that are valuable in my estimation, and I shall avail myself of the first opportunity of testing the efficacy of the drug in some of the affections for which the essayist advises its administration. Of its virtues as an antihydrotic, I would have been made very glad had I known of it in a case o· "sweaty" hands that you know of. The subject has despaired of ever being cured, and I would be glad to learn that you had tested the power of belladonna in relieving him. I can say unhesitatingly that in incontinence of urine from an irritable os cystis (?) from whatever cause, belladonna, in my experience, acts "like a charm." Then, too, in spasmodic affections, resulting from centric or peripheral irritation, or as a result of loss of tone from some constitutional drain or other source of debility, I have found belladonna to act very beneficially. The physiological action, I would be inclined, from these facts, to suppose, consisted in its stimulant effects upon the cerebrum. (The distinct action it may exert upon the ganglionic system may give us a clue as to its potency in certain glandular affections, while its topical administration may have its advantages through the influence wrought upon the inhibitory and trophic branches supplying the part.)

As an item of curiosity, I will give you the description of an eyeless cat I have just seen—now two years old. It is perfectly eyeless—has never had any eyes, though the orbits and lids are perfectly formed. The orbital cavity is regular and of normal dimension, apparently, and the tissues in healthy condition. I inquired particularly into the history, and elicited the information that it had been under sufficient attention since its birth to warrant the assertion that *its eyes* had never been injured or diseased; at least there had been no indication of such a condition. To see the thing, one would scarcely think that it was sightless. It seems to get about as well as any cat, and turn a crippled bird loose in the yard, it can catch it, apparently, as quick as a cat *ought to.*

We are having a great deal of pneumonia now, presenting pretty much always the asthenic type, and generally fatal. My plan is to give stimulants and opiates with belladonna, combined with some counter irritation, in the first stage. Occasionally, when the fever runs high, veratrum is given in two to three-drop doses. On account of the tendency to congestion as a result of debility, I have thought of administering ergot. What do you think of the idea? Upon the theory of its beneficial effect upon the muscular coats of the vessels, I would think such a course reasonable.

Rheumatism in all its varied forms abounds here. I have had, as yet, no occasion to abandon the general treatment of quinine and counter irritation. Catalytics more potent than quinine are chemically indicated often to correct the blood dyscrasia; but for the nervous condition, I rely upon irritation and cups over the spinal column.

Respectfully, R. W. WESTMORELAND, M.D.

BARNESVILLE, GA., Dec. 31st, 1877.

Editor Atlanta Medical and Surgical Journal:

I desire to contribute a mite to the cause of humanity by giving the results of trials made with hydrocyanic acid in the treatment of opium habit. My experience has been limited, but so far I have yet to find a patient that could not quit morphine while under the influence of the acid. In fact, hydrocyanic acid affects them as pleasantly as morphine, without those depressing after effects. You have only to try it to be pleased with its action.

About August 3d, 1877, I began administering the acid to this class of patients. I did so with a great deal of hesitation, knowing its powerful effect. The patient was taking two grains of morphine each day. I gave him dilute hydrocyanic acid two drops, administered in glycerine, at 7 A.M., 12 M. and 8 P.M. Should the dose not sustain him, the direction was to enlarge ½ drop; should it produce giddiness or tightness about the head, to reduce dose ½ drop. This patient got well in sixty days without any unpleasant symptoms. Some time after, an old patient of mine, whom I had tried to break of the habit by the plan of gradual reduction which I had practiced, began taking the acid in the dose of two drops three times each day. She got entirely well in one month, with no desire to return to the morphine. In November I was sent for to see a young lady who had become addicted to the morphine habit from its use in neuralgia. I found her suffering more from the morphine than disease, and simply put her on the use of the acid, the dose of two drops three times each day, with direction to enlarge or decrease, as the case might require. I remained with her twelve hours to witness the effect of the drug, which was just as pleasant as I could ask. I never saw her any more in a month, when she came to town well. I have now two other inveterate cases taking the acid with good effect, apparently, and although the number of cases treated is not sufficiently large to set it down as an infallible cure, yet I trust that you will give the remedy a trial, for to my mind we have no class of patients that demand our earnest consideration more than the opium eater.

In some cases the acid is gradually reduced toward the close of treatment, while in others it is suspended at once without inconvenience. The following is the form in which I give the acid:

℞.—Diluted hydrocyanic acid, . .	gtt. xlviij.
Simple syrup, ...	f℥ij.
Water, ...	f℥j.
Red aniline, ...	gr. xv.

Dose.—One teaspoonful at 7 A.M., 12 M. and 8 P.M. The red aniline serves no other purpose of course, than to give it a beautiful red color. Truly,

W. C. BLALOCK, M.D.

EXCERPTA.

Excipients.—Before the days of glycerine, pill makers, as well as pill takers, had good grounds to complain. The former, because his stock of ready-made pills had to be very frequently renewed, in order to present a soluble article; the latter, because it was not unfrequently the case to find, instead of pills swallowed, it was something nearer the insolubility of bullets, for, despite all the solvent fluids of the stomach, they persisted in passing off whole, undissolved, unchanged. The universal excipient was gum arabic, tragacanth and syrup, water, or a combination of them—confection rose. To this subject, of late years, more interest has been paid than before, which has given rise to a number of suggestions as to excipients.

The writer, having a considerable experience at the compounding counter for a number of years, has tried almost every excipient published, and tested many of his own. He came to the conclusion that, at the prescription counter, three or four excipients are absolutely necessary for elegant work:

1. A liquid containing glycerine 3 parts, alcohol 1 part. It is best to keep this in a wide-mouthed bottle. The cork should be perforated by two holes; one for an exit tube, another for a bulb, so that by pressure upon the bulb the liquid will come out of the tube, drop by drop.

2. Soft excipient, containing grs. lxx tragacanth and ℥ j glycerine.

3. Hard excipient. Tragacanth ℥ ij and glycerine ℥ j.

4. Adhesive excipient, composed of balsam fir 1 part, rosin 1¼ parts, wax 1¼ parts.

It would be too tedious for me to describe the merits of each of these separately; but one in regular practice, who furnishes himself with this list of excipients always on hand for immediate use, will in time find they are indispensable. As to ready-made pills, glycerine, unquestionably, is the only article which will keep them soft and soluble for any length of time.

It is true there are many other articles which the expert brings to hand in order to bring his mass to the nice condition called pillular. For example: iodide of iron pills need a little thickening with pulv. glycyr., before adding the adhesive excipient; some gum resins need a little alkali, soap or carb. potass.; oleo resins need a little magnesia, copabia (about one-sixteenth of its weight calcined or its own weight of carbonate). Articles of fatty nature, also croton oil, creosote, etc., crumb of bread.

The great point in nice pill making is to have a well educated idea of firmness and adhesiveness. Plasticity is a well-balanced union of these two, I might say opposite, forces. Its presence gives the perfection to pill mass, sufficient softness to roll out with ease, with firmness requisite to enable the pill to maintain its correct shape.—*Druggist and Chemist.*

TREATMENT OF DIPHTHERIA.—Our village contains less than six hundred inhabitants. Has long been noted for its healthfulness. About the middle of last September it was visited by an epidemic of diphtheria, since which time there have been sixteen deaths from the disease. All the deaths were between the ages of two and fifteen years. I have treated thirty cases in all, some of marked severity. I had one death only; it in a family of fourteen members, five of whom were subjects of the disease, crowded into a room twelve by eighteen feet, in squalor, filth and ignorance. This case had epistaxis till he nearly bled to death, then laryngitis, with exudation, till his life was despaired of; yet he lived two weeks after all traces of the diphtheretic membrane had disappeared. I feel satisfied that, had he had proper hygiene and suitable nursing and food, he would have recovered. I used in all but my first case the sulpho-carbolate of sodium, as recommended by Dr. Anthony, of Providence, R. I. I use it in doses from five to thirty grains, in an aromatic syrup. I also use freely a saturated solution of chlor. pot., beef tea and milk. No swabbing or gargle; tonics when indicated. I have noticed an entire absence of fetor in my cases, which is in marked contrast with cases treated by others, who have used quinine, tr. ferri. chlor., pot. chlor, etc. I have not seen the least bad effect from its use in large doses. I am beginning to have faith in it as a prophylactic, and think it is worthy of further trial.—*D. A. Philips, M.D., in Philadelphia Medical and Surgical Reporter.*

Another evidence of the carbolic acid treatment of diphtheria being useful.—[ED.]

ORTHOPÆDIC TREATMENT OF PARALYSIS OF THE OCULAR MUSCLES.—The author, Prof. Michel, calls attention to a new method for the treatment of paralysis of the ocular muscles, based on the principle of *passive movements*.

The following is the method : the conjunctiva is grasped near the scelero-corneal border over the insertion of the paralyzed muscle, with the ordinary fixation forceps, and the globe of the eye turned in the direction of the paralyzed muscle, beyond the point it is usually carried by the normal contraction of the muscle, then back again, these motions back and forth to be continued about two minutes. He says the effects are greatest immediately after the operation and are quite astonishing. The improvement amounts to at least 1½ millimeters.

The pain of the process is slight and the conjunctival irritation readily subdued by cold compresses. One exercise a day is employed.

He claims as the chief advantages of the method: (1) elimination of the action of the antagonist muscles, (2) shorter duration of the treatment.—*The Clinic.*

INDICATIONS AND CONTRA-INDICATIONS FOR ATROPINE AND CALABAR IN EYE PRACTICE.—The *Korrespondenblatt Schweizer Aerzte* contains an address on the subject delivered by Dr. Horner, of Zurich, before the medical society of that place. He recommends the former as a narcotic (1) in pains resulting from wounds of the sub-epithelial terminal fibres of the trigeminus, also after the removal of foreign bodies, in pustules and superficial traumata of the cornea; (2) in reflex spasm, which, produced by wounds of the terminal filaments of the trigeminus, extend thence to the facial, in blepharospasm and photophobia. As a midriatic, atropine is employed for diagnostic purposes to detect changes in the bottom of the eye, the lens and the choroid; and therapeutically to provent and to cure iritis. The paralysis of accommodation produced by atropine is sometimes utilized in certain spasms of accommodation, and in the cure of certain forms of progressive myopia in children. It should never be employed in glaucoma, and must be cautiously used whenever there is a tendency to atrophic conjunctivitis, and in cases of marked injection of the conjunctiva.

Calabar, possessing a myotic action, is ordered in the form of eserin or physostigmin in cases of natural or artificial midriasis, before the iridectomy for glaucoma, in very large corneal ulcers and iris-prolapses of accommodation, and in those forms of glaucoma in which the intra-ocular tension is not sufficiently reduced after iridectomy.—*Medizinisroe Neaigkeiten*, November 17, 1877.

Local Effect of Quinine in Diphtheria.—Dr. E. J. Zinke, of Cincinnati, in the *Clinic*, extols the use of quinia as a topical application in diphtheria. His experience is confined to three cases, but the success of the remedy was the more marked from the fact that these three recovered while four cases treated in the orthodox manner immediately before, terminated fatally. The manner of using it was in solution and applied by means of an atomizer; strength, a drachm of the salt to an ounce of water, with enough hydrochloric acid to make a clear solution. Quinia acts by killing the micrococci, masses of which, betraying no signs of life, were discovered by Dr. Zinke in membranes thrown off in the cases reported.

Curari-Woorari—A Cure for Hydrophobia.—At Munster, Westphalia, Germany, a girl was bitten by a mad dog the 23d of July. On the 16th of October following, hydrophobia manifested itself, and morphia and chloroform were futile in allaying the spasms. Dr. Offenburg then injected three centigrammes of curari-woorari, and repeated it five times, though not always in equal quantity, for four hours and a half. The convulsions began to diminish after the second injection, and soon disappeared. Paralysis of the chest was prevented by artificial respiration, and in two weeks the girl was well again. The remedy is a terrible one, but the disease is still more so, but the success of any remedy will be hailed with the greatest satisfaction by humanity.

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IS MODERN EDUCATION EXERTING AN EVIL INFLUENCE UPON THE EYE-SIGHT OF YOUR CHILDREN?

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There have always been, and even in our own day and time there still exist, those who are in doubt as to which is the most important, the most indispensable of all our organs of sense. But especially often is the question asked, "Which is the greatest deprivation, the loss of sight or the loss of hearing?"

How almost universal is it that the blind appear bright, happy and cheerfully resigned to the great loss they have sustained, while the deaf are not unfrequently dissatisfied, unhappy and mistrustful. It has been my lot to have had much intercourse with these two classes of individuals, as well in private life as in the well-filled and well-managed institutions for their benefit throughout various portions of the world; and this remakable contrast between them is the more apparent, the more thorough and the more intimate my acquaintance grows. The doubt, indeed, is untenable, for in the eye we have that organ which brings us in the most immediate relation and connection with the outer world, with mankind, with the brute creation, with all nature; for she best expresses herself to us through her visibleness. This alone suffices for us to comprehend. Nature offers much less for the hearing, for never can we learn to conceive of objects as they really are, from the noises which may emanate from them and perceptibly strike our ear. On the contrary, imagination readily brings to mind the soft notes of the musical instrument that we *see*. We can often understand and comprehend men without hearing them, from the movements of the body and from their countenances. We can read from their lips what they speak when not a single tone is audible.

That sight is a direct aid and support to each of the other organs of sense, can be readily tested and proven by each and every one. The finest and most delicate viands never taste so well as when we *see* them. The enjoyment of the most fragrant flower is considerably heightened by the *sight* of it. A sensation, however pleasant to the touch, is infinitely increased when we *see* the cause that calls it forth.

It is in the school-room that the largest and most important portion of the child's life is spent, and while the whole energy is bent upon the proper development of the brain, it is not seldom that too little attention is given to the true maxim that "only in a healthy body can a healthy mind live." During these same years must the physical development progress, but how often can we trace back to those school days the ground-work of bodily ailments, which prove to be stubborn barriers to all future advancement.

Now, as the eye must play the role of a mediator between the subjects to be learned and the working brain, it is easy to understand that in the same proportion that work is demanded of the brain, in like degree does a tax fall upon the eye, and so it happens also that the eye, which, as the general body, is perfecting itself during these very years of school life, undergoes not unfrequently powerful changes, which we can speak of only as diseased conditions, not only not admitting of cure, but here and there leading to the destruction of the organ of sight.

After we have shown that the eye suffers such powerful and unwholesome changes during the years spent in the school-room, then it is our purpose to demonstrate that certain influences during these years *originate* diseases of the eye, and finally to enumerate the means, with the help of which we hope to be able to at least limit the frequency and degree of intensity of these diseases.

We always judge of an eye according to its length, and in eyes of different length we have different vision. In this particular we recognize three different conditions, known as conditions of refraction. These are:

1. Emmetropia or normal sightedness.
2. Myopia or near sightedness.
3. Hypermetropia or over-sightedness.

That these conditions may be clearly understood, and for a thorough comprehension of the dangers dependent upon a certain one (2d) of them, it is perhaps well that I should say a few words descriptive of them.

The hypermetropic or over-sighted eye is too short a ball, and is a congenital *defect.*

The myopic or near-sighted eye is too long a ball, and in *every* degree, from the slightest to the greatest, is not only a real *defect*, but is also an *absolute disease.* In the interior of every eye there is a circular muscle (the ciliary) known as the muscle of accommodation, by whose action we are enabled to accommodate our visions for all distances, for near, distant and all intermediate points.

In the emmetropic or normal-sighted eye, the action of this muscle produces no peculiar, no unpleasant sensations, for it acts within normal limits. But in the over-sighted or hypermetropic eye, both for seeing distinctly in the distance and very specially for seeing near objects, this little muscle must exercise excessive force, and indeed the excess of force is the greater, the more over-sighted the eye or the shorter the ball.

A muscle that is brought into constant unnatural activity gradually passes over into a convulsive, spasmodic condition, or is so much fatigued that it is no longer able to undergo work. Both of these conditions take place in the human eye. The characteristic symptoms of this condition are as follows: Such persons (adults as well as children) are able to execute the very finest work for a greater or less time, perhaps without trouble, then gradually, may be suddenly, the work becomes indistinct, obscured, and things seem to run into each other. At times it appears as if a cloud were floating immediately in front of the eye, and one is no longer able to continue the work, and as a consequence a few moments' rest follows, the eyes are rubbed, and after a pause of a short interval the work is again resumed, but mostly only for a short time, for the same symptoms return. Particularly is this the case towards evening, after an entire day's toil, or towards the end of the week, after a whole week's constant use of the eyes, while on Monday, and especially Monday morning, in consequence of resting the eye, and therefore resting the muscle of accommodation on the inside of the eye during Sunday, the vision is at its very best. In some instances, this wearied condition of the muscle appears so suddenly that the persons affected think themselves blinded, and when they seek assistance and are told that the use of proper glasses will forever remove the trouble, they are astonished as well as rejoiced.

Unfortunately, it is not seldom the case that a great wrong is done children affected with over-sightedness; parents and teachers attributing the difficulty with which they progress in their studies to a "stubborn will" or "idleness" manifesting itself in their complaints of tired eyes, inability to go on with study, headaches, and so on, when in truth it was due to the over-taxed muscle of accommodation. I have had frequent occasion to call to these facts the attention of parents and teachers whose children or pupils may have been sufferers from over-sightedness.

But it is to that condition of refraction known as myopia or near-sightedness I wish to direct attention specially, for while the over-sighted eye is an eye of defective growth without disease, the near-sighted ball is not only defective in growth, for it is too long, but is in the real sense of the term a *diseased* eye. The celebrated Donders, in his work on refraction, takes this as his motto: "I speak it without hesitation, that a near-sighted eye is a diseased eye." Let every one, then, seek diligently *not* to become near-sighted. As we have seen, the longer the eye the greater the near-sightedness, and the highest degree of it corresponds to the longest eye.

Very rarely before the fifth or sixth year of life does near-sightedness make its appearance—about which time children usually begin their attendance upon school—but from this time on, under certain unfavorable circumstances, the eye gradually elongates, reaching and remaining perhaps at a certain point of elongation, a slight or high degree, or constantly increases through all the years of school life, even to the twentieth or twenty-fifth year, and indeed in some instances continues slowly to lengthen through almost the whole life. But it is not simply the elongation of the ball that is so much to be feared, but consequent changes which have an important bearing upon the acuity of vision, upon the movements and upon the very existence of the eye.

If a hundred men with perfectly good eyes are able to recognize or read at a certain distance, say twenty feet, one and the same letter or number of letters, it is reasonable to conclude that any other person with equally good eyes could recognize and read the same letter or letters at the same distance. But if one is incapable of doing this, even with the defect of refraction (if such exists) corrected by proper glasses, then this one has less acuity of vision than the one hundred who were able to do so. This diminution of vision is a frequent and common circumstance with near-sighted individuals, and depends upon the diseased changes taking place on the interior of the eye, brought about by the abnormal lengthening of the ball.

The movements of the ball are controlled by six muscles, and over their action near-sightedness exercises a very great influence, because of the ball being so long. There exists a peculiar but certain connection between near-sightedness and the contraction of one of these muscles (the outer), causing the eye to turn outwards, constituting what in common parlance is known as *external* squint or cross eyes. A corresponding connection exists also between *over-sightedness* and *internal* squint, so that, indeed, in the majority of instances we are able to say when we see a person squinting *outwards* that he is *near-sighted*, and when *inwards* that he is *over-sighted*. There are, of course, exceptions to this rule. In every near-sighted individual the very existence of the eye is in danger, but especially so in those cases of *progressive* myopia, attaining finally a high degree. Such an eye can any moment become suddenly blinded through detachment of the retina, the lining nervous membrane on the interior of the eye, resulting always in a very material reduction of sight, and in the majority of cases in irretrievable loss of vision.

Doubtless the question has already been asked, cannot this too short eye be made longer, and this too long eye be made shorter? No, I answer; for these changes in the eye must remain forever unchanged, but we can correct the defect in the *over-sighted* eye, in so far as the unpleasant and painful symptoms from the use of such an eye are concerned, and make the vision as comfortable as in the normal-sighted person. And we can make the *near-sighted* see not only near but distant objects. It would be out of place here to go into a detailed description of the means at our command for such correction. Suffice it to say, it is done in the first instance (the over-sighted eye) by the use of convex, in the second (the near-sighted eye) by the use of concave glasses. The question naturally propounds itself, are we able to prevent this diseased lengthening of the eyeball, this near-sightedness, or after it has begun, are we in condition to at least prevent its increase? This is a question full of the most vital importance, and it is the question that has led to the investigation of the eyes of a very large number of school children, after it had once become positively known that near-sightedness developed itself *particularly*, indeed *almost exclusively*, and attained its very highest degrees *during* the years of school life. So far as I can gather, there are the records of the examinations of the eyes of about 45,000 (forty-five thousand) school children, of all ages and of all grades, representing both white and colored races, and both country and city schools. Some of these investigations would lead us to conclude that the percentage of normal-sighted, others that the percentage of over-sighted children, prevailed in the largest degree, but all, without a single exception, prove beyond a doubt that *near*-sightedness, beginning perhaps at *nothing* in the lowest classes and first years of school life, steadily increases from class to class in the school until in the highest grades or in the last years of school attendance, it has actually developed itself in as many as sixty or seventy per cent. of all the pupils. Amongst this large number we have children whose ages range all along from five to twenty years and upwards, all similarly occupied, and during a time in which the eye undergoes its most important changes—changes which will influence more or less the regulation of their entire lives.

In the schoolroom we can follow the eye from its beginning on—from its primitive condition, as it were—where as yet, it has been exposed to no injurious influences, and can follow it through a series of years to an age in which we can mark the boundary, beyond which we can say, the further development of it under certain conditions will be for good, under other conditions, for evil.

Now we have found that in the *very early* years of life, *no* eye is near-sighted, and even in the *lowest classes* at school *no* near-sightedness exists, or if at all, only in the slightest degree, and also that in the highest and last school classes, containing the oldest pupils, as much as seventy or even a larger per cent. of the scholars are near-sighted. Knowing all this, the question presses itself upon us: how is it possible for an eye in a space of time from twelve to fifteen years, to undergo such a transformation? If nature prescribes or dictates these changes in the human eye, why is it then that *all* are not near-sighted? Or do unfavorable circumstances or conditions lend their assistance in bringing about this diseased lengthening of the eyeball? Or have the sufferers inherited the disease from their parents or ancestors, and if so, why is it that these children are not near-sighted from birth?

Some very interesting observations have been made during these investigations, and prominent among them are:

1. That over-sightedness (a too short ball) is originally the normal condition of the eye, and to reach the near-sighted state (a too long ball) the eye must pass through the normal-sighted condition (a normal sized ball).

2. That with the increase in years, and with the rise in classes, the number of near-sighted children more or less rapidly increases.

3. That near-sightedness in city schools is much more frequent than in schools in the rural districts, due to the better surroundings in the country, less strain and more rest for the eye.

4. That colored school children are remarkably free from near-sightedness, the per centage being exceedingly small. In my own examinations of this class of students, I have seen very few who were near-sighted.

5. That children frequently have the trouble, whose parents or grandparents had the same, and that the acuity of vision is more frequently defective amongst the near-sighted than amongst any others.

I have before me the results of the examinations of the eyes of nearly 2,200 school children in and around Bern, the capital of Switzerland, and I take these tables because they are a fair type of all the others. These show that the majority of children begin school life with emmetropia or normal-conditioned eyes, but that the number of normal-sighted children invariably and constantly diminishes as they rise from grade to grade. They show, also, on the other hand, that myopic or near-sighted eyes scarcely exist at all, or in very small numbers, in the youngest children or in the lowest classes, but as they grow older and go higher and higher in studies requiring closer application of their eyes, just as invariably and just as constantly does near-sightedness increase, as normal-sightedness diminishes under the opposite condition of things. In similar proportion also as near-sightedness increases does over-sightedness diminish, showing beyond the shadow of a doubt that both normal-sighted and over-sighted eyes, (with one of which almost all children are born,) under the influence of school life and other unhealthy surroundings, gradually lose their healthy condition, until finally in the last school years, and in the highest grades or classes, near-sightedness, a truly diseased condition of the eye, becomes the condition of refraction in as many as seventy per cent of those now just in the very beginning of manhood and womanhood. This is truly a sad picture and a sad commentary upon the boasted civilization of the latter half of the nineteenth century, but it is true to the very letter, and needs but a most superficial study of the subject to convince him who doubts most. But not only among school children do we find near-sightedness developing itself, but also amongst teachers, book-keepers, engravers, watch-makers, newspaper men, and indeed amongst all those who have occasion to look at fine objects for a long time, keeping the muscle of accommodation in a continued strain for a greater or less period. In all adults, however, the disease develops itself with much less frequency and with more difficulty than in children, because the tissues forming the eyeballs in the grown person have received their growth, become hardened, and are much less influenced by excessive use than those of a child.

Is it then a great misfortune to become near-sighted? Since a near-sighted eye is a diseased eye, this question bears its own answer upon its face. But what is the cause of near-sightedness, and since we cannot cure the disease—cannot make this too long ball short again—are we not able to prevent others falling into the same unfortunate condition? The two principal causes are heredity and occupation. Others may exist, but they are unimportant in comparison with these two. That over-sightedness is often hereditary is a matter of every day observation; several members of the same family not only having the defect, but oftentimes having it in exactly the same degree that existed in the eyes of their parents or grandparents. Of necessity, must hypermetropia or over-sightedness be at least congenital, but not so with myopia or near-sightedness, for it can be either hereditary or acquired. The tendency to the trouble may exist from birth, but the disease itself may never crop out unless conditions favorable to it present themselves. On the contrary also, very many children acquire near-sightedness in whom there is no natural tendency to the disease, whose parents or grandparents were entirely free from it. It has been mentioned that in the children in country schools near-sightedness was, comparatively speaking, scarcely to be found. These pupils are the children of parents who themselves perhaps attended school but little during the early years of their lives, and had strained their eyes very little on near objects, hence the absence of an hereditary tendency to the disease in their children. The parents and grandparents of city school children have themselves, perhaps for generations back, attended city schools, and have year after year engaged in those avocations in the city which are a constant strain to the muscles (particularly the ciliary) of the eye, leading ultimately to a lengthening of the ball, a tendency to which is transmitted from generation to generation. Out of nearly five hundred (500) negro school children examined in New York by Dr. Callan, only two and a half per cent. were found near-sighed, and out of thousands of the natives of British India, examined by British surgeons, not a single one was found to be near-sighted. Amongst a large number of negroes examined by myself from time to time, only two cases of near-sightedness have as yet come under my observation. These were in grown negro men, who for eight or ten years had applied themselves unremittingly to their studies and had acquired a very extraordinary amount of intelligence, but at the cost of a defect of their eyes, which must forever leave them in a diseased state. The negroes then, are as yet but little subject to near-sightedness, because their forefathers never had occasion to use their eyes to an injurious extent, and hence, as yet also, only the tendency to good eyesight have they inherited from them.

Now, while heredity gives rise to the tendency to near-sightedness, and certain subsequent avocations cause its full development in a large number of instances, still there is no doubt whatever that the avocations of individuals during school years, as well as later, is often the sole cause of the disease, without the existence of the slightest hereditary tendency. In the schoolroom there are two kinds of influences that work injuriously upon the eyesight. Under the first are classed all those things which compel the eye to strain itself in order to see distinctly small letters or objects. Under the second, all those which cause a congestion of or rush of blood to the head and eye. To the first belong bad ventilation and improper light, too small and imperfect type, pale ink, many successive hours at the same kind of work, as in reading, writing, sewing, etc., without change or rest of the eye, all sorts of toil causing the use of the eye until late in the night and sometimes with very defective light. To the scond belong not only those things just enumerated, but also the construction and arrangement of school desks and benches, which in many schools make it next to impossible for pupils to hold their bodies in proper position for any length of time.

For demonstrating the role that bad air, bad light, etc., play in the schoolroom, I extract some pertinent remarks from a paper published by Dr. Loring, of New York. He says:

I am therefore of the opinion that bad air alone, acting as the primal cause, may set in train a series of morbid processes, which may, and often do effect, not only the working capacity and integrity of the organ, but which may lead even to its total destruction. Thus simple irritation of the mucous membrane of the eye may, and often does, pass into actual inflammation, which, increasing in violence, may proceed from part to part till the entire organ is involved, and thus the sight become impaired or totally lost.

Ought not the light to fall, not full in the face of the child, but first on the book, or work, and be reflected into the eye?

Before answering this question precisely as it now stands, I should like to premise it by making the general assertion that not only is the direction in which the light comes important, but also its quantity and quality. Reduction in illumination is, as a rule, precisely equivalent to a reduction in the size of the object. Therefore, the less the light, the nearer an object has to be brought to the eye, and the greater the strain in the act of vision.

It is impossible to fix with any scientific exactness just the size that a window should be to give sufficient light for visual purposes, since this must vary with the exposure and surroundings of the room; but it has been reckoned in Germany that for a class-room containing twenty persons, there should be at least 4,000 to 6,000 square inches of glass, which would give to each scholar from 200 to 300 square inches, or what would be represented by a pane of glass from 14 to 17 inches square. Such a room as this would be sufficiently lighted in any part. A room 20 feet square should not contain less than 70 to 80 square feet of glass, and it may be laid down as a rule that too much light cannot be obtained in a room, as all excess of glare can be guarded against by artificial shades if properly applied.

More light enters the room from the same amount of glass from the south than from the north, and a southern, southeastern or southwestern exposure is better than a northern, northeastern, or northwestern, especially for class-rooms, and this, too, simply in regard to the amount of light and independent of the purifying influences of direct sunlight.

That a north room is better for the purposes of the artist is due to other causes and does not affect the general rule.

The light should not come from directly in front, and especially is this the rule when artificial light is used. For when the light comes from directly in front of the person, the pupil of the eye becomes unduly contracted, which is equivalent to reducing the quantity of light, since less light enters the eye from the object viewed, while the eye is exposed to too much light reflected from the surrounding objects, and from the direct rays from the source of illumination.

Neither should the light come from directly behind, as the object then lies in the shadow of the body. Nor yet from the right side, because in writing the shadow of the hand falls across the page, and a moving shadow over a lighted surface not only reduces the quantity of light and leads to a stooping position, but it is also more annoying to the eye than a uniform reduction in the illumination of even a greater degree.

The best direction for the light to come is from the left-hand side, and from rather above than below the level of the head. Windows, therefore, should not be run down too near to the floor, as they often do in class-rooms and offices.

I cannot agree with the opinion often expressed, that the best direction for the light to come from is from directly above.

I cannot refrain from adding, in this connection, the conclusion founded on Dr. Cohn's elaborate investigations in regard to the near-sightedness among school children in Germany. He thus formulates it: "The narrower the street in which the school-house was built, the higher the opposite buildings, and the lower the story occupied by the class, the greater the number of near-sighted scholars."

I should, then, from these considerations, say that the angle at which the light strikes the eye is important, and that it ought not to fall in the face of the child, but first on the book or work, and be reflected into the eye.

Does the size and quality of the type cause disease of the eye?

First, in regard to size of type. The smaller an object is, the nearer it has to be brought to the eye to be perceived.

It has been accepted by occulists that type embraced by an angle equal to 5′ (five minutes) is the smallest printed matter which can be recognized by the average normal eye. According to this formula, the smallest print which a normal eye can readily recognize at a distance of one foot is about $\frac{1}{50}$ of an inch, at eighteen inches (the average distance at which the book is held by an adult,) the smallest recognizable type would be about $\frac{1}{32}$ of an inch. The normal eye should never be subjected for any length of time to a type smaller than twice this size, that is, $\frac{2}{32}$ ($\frac{1}{16}$) of an inch, and it would be better, after middle life, to employ a type even a little larger than this. The fact, however, that spectacles are now so commonly used, removes, in a great degree, by restoring to the eye its former focalizing power, the necessity of a larger type with advancing years. Young children should never hold the book nearer to the eye than ten inches, and adults never farther from the eye than eighteen inches. As soon as perfectly distinct vision at this distance cannot be obtained, and if obtained cannot be easily maintained, recourse should be had to spectacles.

The finer, then, the type, the closer the book has to be brought to the eye, and the greater the tension or demand on the focalizing power, and the muscles which are used in bringing both eyes to bear at the same time upon the object viewed. These two acts make what is called the act of accommodation of the eye, and tension of the accommodation, that is, long continued use of the eye upon objects brought close to it, is considered by all authorities one of the most, if not *the* most, fertile causes of progressive near-sightedness.

This condition may be accompanied by morbid processes, which may involve the deeper-seated membrane of the eye to such a degree as to not only affect the vision, but to destroy it. Too fine print, therefore, may be, I think, looked upon as a factor in producing eye disease, affecting not only the external, but also the internal parts of the organ.

On the other hand, too coarse print is wearisome to the eye, as it requires more exertion of the muscles governing the movements of the eye; that is, for a given amount of matter; and especially is this the case when the breadth of the page is, if anything, too great. This causes undue exertion on the part of the muscles which move the eye in a lateral direction, and is apt to lead to confusion in finding the next succeding line. It is for this reason that the narrow form of English blank verse is so little fatiguing to the eye.

The popular prejudice in regard to the double column on a page would be untenable were it not that the same economy which restricts the amount of space also reduces the size of the type and crowds the lines together. A double column page which is well printed and properly divided is certainly preferable to the same amount of matter extending in a single line across the entire page.

The distance between the lines, that is, from the bottom of the line to the top of the other, should be about $\frac{4}{32}$, or one-eighth of an inch. Nearer than this is apt to be confusing; farther, fatiguing.

QUALITY OF TYPE.—The less contrast there is between an object and its surroundings, the more difficult it is to see the object, and the closer it has to be brought to the eye. A faintly printed page has, therefore, to be brought nearer, oftentimes very much nearer, than a well-printed page of the same type. There is nothing more wearisome to an eye than an indistinct and blurred image of a familiar object, and no more striking example of this could be found than blurred or faintly printed type. This should be sharply cut, and what is technically called "heavy-faced," in contra-distinction to "light-faced" type. Of the former a common example is the English; of the latter, the American.

The ink is also a matter of importance.

English ink, like the type, is vastly superior to the American. The color and quality of the paper has also an influence upon the ease with which the act of vision is performed. For, while it is true that there should be as much contrast as possible between the type and its surroundings, care should be taken to avoid all glare or dazzling of the page. Pure white paper, such as is ordinarily used in this country, should not be employed, most of all when it has, as it often does in the cheaper papers, a metallic lustre with a bluish tinge. I have come to the conclusion that, as a rule, a very light, almost imperceptible, yellow tint is the best. This is known in the trade as "natural" tint, from the fact that it contains no dye whatever, and has been bleached only to a moderate degree. It has the color of unbleached cotton cloth. It is, however, expensive, as it can only be made from the best stock; still a very good imitation can be had in some of the second-class papers at a moderate cost. The paper should be thick enough not to be transparent, should have a close, fine texture, and be free from sponginess.

From these facts I am of the opinion that, both in respect to size and quality, imperfect type may be considered as a factor in the production of eye diseases.

Does too long and constrained attention to one object, without rest or variety, cause eye disease?

That prolonged tension of the eyes may be the primal cause of a great number of diseases of the eye is admitted by all authorities, and the more fixed the gaze and the narrower the field of view, the greater the danger. If it be true that continued tension of muscular and nervous force unduly exhausts the energy of any organ, it is doubly true of the eye. The nervous energy of the retina, sensitive and rapid as it is, is just as rapidly exhausted, and the act of reading would be unbearable after a few moments if the eye did not quickly change its position from letter to letter and from line to line. Diversity of action is as much a necessity in the case of the eye as of any other organ for an easy and lasting performance of its function. No eyes, in my opinion, should be used more than an hour at the farthest in the act of reading or writing without an interruption of the gaze, and it would be better if several, if not many interruptions should take place in the same time.

This usually happens in the case of adults, for some reason or other; but children, in order to complete their tasks in an allotted time, are often compelled to use their eyes, without sufficient interruption, by the hour together. It would be impossible, and out of keeping with the condensed character of these remarks, to enumerate here all the diseases which may arise from prolonged tension of the eyes on near work; but there is one affection produced by it, which is so frequent in its occurrence and so unfortunate in its results, that I cannot refrain from quoting the remarks of the distinguished Prof. Donders. He says:

"The distribution of near-sightedness chiefly in the cultivated ranks points directly to its principal cause: tension of the eyes for near objects. Respecting this fact there can be no doubt.

"Three factors may here come under observation: 1. Pressure of the muscles on the eye-ball in strong convergence of the visual axes; 2. Increased pressure of the fluids, resulting from accumulation of blood in the eye in stooping; 3. Congestive processes in the eye which, tending to softening, give rise to extension of the membranes. Now, in connection with the causes mentioned, the injurious effect of fine work is, by imperfect illumination, still more increased.

"To this it is to be ascribed that in schools where, by bad light, the pupils read bad print or write with pale ink, the foundation of near-sightedness is mainly laid, which, in fact, is usually developed in these years."

But little will be said in reference to desks and seats, though it would seem they deserve the most careful consideration on the part of those in charge of the education of children, since a large portion of a child's life is spent behind the one and upon the other. It has been contended that every pupil should have a desk to suit his size, but this in many instances is impracticable for several reasons, but mainly on account of the expense. The chief idea to be borne in mind in the arrangement of desks is that they should be so constructed that the children can sit without becoming too rapidly wearied, and that they (the desks) should not be so low as to cause the body to bend forward, nor so high as to make studying difficult, as in writing for instance.

But of what use are all these proper arrangements at school, if as soon as the children get to their own homes, they write and study at tables that are inconvenient even for the grown members of the family? Of what benefit is the most superb illumination in the school-room, if the children, when at home, work several hours of the day in the corner of a badly-lighted chamber, and at night by the light of a flickering candle or lamp, used perhaps by five or six others of the family, and which is insufficient to properly light up the book or map of even one or two of the children? If we wish to protect the eyes of children during the time in which they are acquiring their education, give them above all things else, plenty of well-regulated light.

They should be prohibited using their books during twilight, by the light of the moon, and certainly should they be forbidden such dangerous use of their eyes as reading in bed.

Says a well-known writer: "It seems to me that the very etymology of the word education enforces the idea that the child is to grow better and stronger up through his school life; that by proper regulation of his diet and management at home; by properly lighted school-rooms and properly constructed desks, and a better regulation of his hours of study, he should represent a much higher type of life when he has reached the age of twenty-five, than when he is just taken in hand with the view of giving him book knowledge. We certainly should not damage the eye in the process of education, and I believe that the damage done to the eye is to be taken as an index of that which is done to the other organs of the body."

In conclusion, when every school house in the land, and every school-room and school desk shall have been properly constructed according to the most scientific investigations, and plenty of good light thrown upon books properly and plainly printed with good ink—when the habits of study of all children shall have been regulated, both in the school-room and at home, then do I feel convinced that while we may not be able to banish these particular eye diseases from the world, without doubt will we be able to reduce them in number and in degree of severity.

THREE FAMILIES POISONED BY EATING ICE CREAM AT MACON, GA.—THE SOURCE OF THE POISON, AND REPLY TO THE OPINIONS OF DR. C. A. CHEATHAM, PUBLISHED IN THE "DAWSON JOURNAL," AND DR. MATTAUER, AS HERETOFORE REPORTED IN THE "MACON TELEGRAPH AND MESSENGER."

By WILLIAM A. GREENE, M.D., Macon, Ga.

In the month of September, 1877, there occurred in this city a serious accident of poisoning from eating ice cream, in a boarding-house kept by Miss Gregory, in which some fifteen or more persons were the victims. The affair created a great excitement in the community, and various and conflicting reports were spread abroad as to its cause and origin. Four members of the family of Dr. C. A. Cheatham, of Dawson, Ga., were among the number thus poisoned, and his daughter, a beautiful and accomplished young lady, died within a month, and before this excitement had subsided another family were attacked in precisely the same manner, as well as a neighboring family to whom a portion of the ice cream had been sent. Of course the anxiety and excitement of the community were greatly increased by this second accident. Mr. James Seymour, in whose family this last occurrence took place, and who had been an invalid for several years, and also partook of this ice cream, also died. Our distinguished fellow townsman, Dr. Mattauer, was the attending physician of this family. Very soon after the first occurrence, in Miss Gregory's boarding-house, Dr. Cheatham published an account of the cases in his own family, and gave his views as to the cause, origin, and treatment, which was published in the Dawson *Journal*, a newspaper of his city and home. And after the second occurrence, the reporter of the local column of the Macon *Telegraph and Messenger* called on Dr. Mattauer, and published in his paper an account of the interview, quite fully. These gentlemen did not differ materially in their opinions. I do not deem a newspaper the proper channel for the discussion of subjects in medicine, and, therefore, ask space in your JOURNAL for the investigation of the causes of these unfortunate accidents. A large number of physicians in this portion of Georgia, no doubt read these newspaper articles, and will be better prepared to understand the points I make in attempting to controvert their positions, and, without consuming too much space, I hope to make myself sufficiently intelligible to all. It will be seen the non-professionals have taken much interest in this matter; but my article is not intended to make any impression in *that* direction, but to arrive at, if possible, the true solution of the mystery. I would be pleased to hear from either of these eminent gentlemen again, for whose opinions on subjects in the profession I have the profoundest respect. I will not attempt to correct the inaccuracies and errors in the statements of

Dr. Cheatham, in the Dawson *Journal*, as to the history of the treatment and management of the cases of his own family, who were among the unfortunate victims of poison, as many who were present and witnessed the conduct of the cases well know how imperfect is the Doctor's recital of what occurred. Suffice it to say, he wrote what he *believed* to be true, and any controversy in this direction would be inappropriate, besides, intruding on the sacredness and sanctity of grief and mourning, and bring back thoughts and reflections which had better be buried with the "dead past," as the living could not be benefited, and it is better that the ashes of our departed ones rest in peace.

That two deaths resulted from the poison, admits of no question, whether direct or indirect, and that the ice cream was the vehicle conveying this poison is equally as palpable. None deny this.

Then, since this is a delicacy and luxury which nearly all the human race partake of during certain months of the year, and almost daily, must increase the necessity and anxiety for a most critical examination of the probable or possible reasons why this particular ice cream should have been the source of such fatal consequences. In Europe, or perhaps in any of our Northern cities, such an occurrence would never have been permitted to pass by with so little apparent interest to discover the true cause of the accident.

Anything, or any substance, taken into the stomach capable of producing the prompt and violent symptoms that occurred in those fifteen or twenty persons affected, must be out of the order of simple causes, which brings us to the discussion and investigation of the subject under review.

At a certain boarding-house in the city of Macon, within three or four hours after partaking of the usual dinner, all who were present, except one or two who failed to eat ice cream which was served, were suddenly prostrated with violent symptoms, as cramps, nausea, and severe vomiting and purging, extreme pain in stomach and bowels, with dryness and thirst, suffused and watery eyes, and in two cases delirium. Great excitement ensued, and friends and physicians were rapidly summoned to their bedsides. Within a month, in the same vicinity, from precisely the same cause, (eating of ice cream) another family are attacked almost in the same manner, as well as a neighboring family to whom a portion of the ice cream had been sent.

We must necessarily meet with many perplexities in the solution of the questions bearing on cases of sudden poisoning under such circumstances, whether viewed from the standpoint of medico-chemical investigation or of its medical jurisprudence. But by the aid of correct chemical knowledge we will certainly find a correct solution for all doubts; for our acquaintance with our weapons of defense against all disease, or abnormal conditions, depend for their very existence upon a knowledge of chemistry. In chemistry mere hypotheses have no existence, everything must be subjected to experiment; the re-agent and the crucible, the blow pipe and the test, are weapons of argument, and from them there is no appeal. The beautiful simplicity of its laws, admitting of no doubt or confusion, the certainty of its results, must enchain the reason of all who become introduced to them.

Being called to the cases in the house of Miss Gregory, I carefully watched and noted every symptom and the progress of the cases. I was troubled at the time for a solution of the cause of so urgent and alarming symptoms as above mentioned. They evidently embraced the ordinary symptoms of some corrosive or irritant poison, and it is the rule in such emergency, when the physician cannot take the time to inquire into the history of the attack, and investigate everything required to arrive at a correct opinion, to treat the symptoms before him as indicated, the most prominent being the agonizing pain, the incessant vomiting and coliquative perspiring—which seemed to be threatening life—and to apply such antidotes as seemed probably necessary. This was hurriedly done, and the patients made comfortable. Then begun the examination, so far as facilities were furnished for investigating the causes. Feeling my own inefficiency as an expert toxicologist for such work, I at once began a correspondence with the best chemists and toxicologists in the country, and examination of the best authors, being satisfied the opinions advanced by Dr. Cheatham in the article referred to, as well as the reported ones of Dr. Mattauer, were utterly untenable. Therefore the cause must be sought for somewhere else, as there was no suspicion of criminal intent. There have been in the community various and conflicting reports of the professional opinions of the medical gentlemen in attendance, and the non-professionals have very learnedly (!) discussed these opinions and given *their* dictum as to their correctness, value and validity. The truth is, the duties and responsibilities of a physician, when called to cases of sudden and suspected poisoning, are very delicate and embarrassing, and it is necessary he should know to what points he ought to give his attention. While giving medical advice and as far as possible relieving anxiety, it is in his power to perform other duties, if the case should be one of suspected criminal poisoning. In the excitement of the occasion many facts of importance are overlooked. The physician is not expected to make himself too officious on such occasions, but would be unmindful of his duty as a member of society, if he did not aid the cause of justice by extending his scientific knowledge to the detection of crime. But we cannot, in a paper like this, discuss the duties of a medical jurist in cases of suspected poisoning, but refer to the various works on medical jurisprudence—prominent among them, and recognized as authority both in Europe and America, is "Taylor on Poisons," edition of 1877—which should be in the library of every physician and lawyer of the land.

The Danger of Premature Opinions.—When suddenly called to a case of suspected poisoning, and during the examination, the physician is often pressed to give an opinion respecting its nature, before the steps for a process of investigation are completed. This may arise from the anxiety or curiosity of those who are interested in the case, or by the community at large. There is a rule which ought always to be followed on these occasions, that no opinion whatever should be expressed until an analysis is completed. But it often happens, even in the hands of the best chemists, that the last steps of a process lead to a very different result from what was anticipated at the commencement—a suspicion derived from a few incipient experiments is very likely to be overthrown by continuing the investigation. This occurred with me in these very cases under consideration, when I announced by a hurried and simple test that I found mercury in the ice cream, but afterwards found lead, as did others in examining the same sample, and I offer the following cases, which may be found related in "Taylor on Poisons," as some extenuation for my error and hurried expression of opinion: A celebrated case known as the "Broughton Case," in London, where Dr. Bothray gave an opinion in the first instance that the poison administered to the deceased was arsenic, and subsequently testified death was caused by laurel water. Another case where arsenic was supposed to be administered, sulphuric acid was the poison. Again, in a case tried at the King's assizes, a medical expert admitted that at the coroner's inquest he stated the poison to be arsenic, but by subsequent experiment he found it to be oxalic acid. And many other errors may be found in the old English works on medical jurisprudence. Hence the imprudence of expressing an opinion from a few experiments, or until the analysis is complete.

Modern chemical science convinces us that the experiments of testing poisons by giving the suspected article to animals, as cats, are not fitted to convey to us any accurate knowledge of symptoms or doses required to produce fatal effects, and cannot be depended upon; in fact, are perfectly unscientific and unreliable. The "reporter" must remember that his conclusions must be based only on medical facts, not upon novel circumstances. Nor should information derived from others be the basis of an opinion by a medical man, and it is scarcely necessary to remark that a conclusion based upon mere probabilities is of no value as evidence, hence should never be given as such. These rules have always been observed by the best writers, but are totally disregarded by more recent "chemists" and physicians.

It is unnecessary in this paper to recite well-established rules for discovering the causes and sources of poisoning, in either accidental cases or those from criminal intent, all intelligent physicians being acquainted with them; besides, can be found in works "On Poison and Medical Jurisprudence." But in these cases under consideration, it seems to me all the conditions except the most important ones were noticed in the reports furnished the public by Dr. Cheatham, viz., a chemical examination of the ice cream supposed to contain the poison, and of the matters vomited, and *post mortem* appearances and chemical examination of those who died. No opinion could be worth much without these.

The theory advanced by Dr. Cheatham is not sustained by any authority I can find in any works on the subject, but on the other hand, I find abundant evidence of its fallacy. Suppose it were true that any condition of fermentation possible to take place in the mixture (of ice cream custard) could produce the results in these cases, at any time or under any circumstances, we at once see how dangerous it would be for us to use this delicacy that is so common among the people, as accidents of this nature would be of constant occurrence, in place of being exceptional, as no amount of care could prevent it. We are aware that on all excursions and festival occasions this custard is prepared the over night and kept in some convenient vessel, to be frozen when required for use. This simple illustration at once destroys the possibility of any such condition being probable from fermentation of the custard as to produce symptoms of acute poisoning. It would then certainly be hazardous to make ice cream, one of our most usual dishes on any occasion, as we all are aware it is seldom absent from the "bill of fare." But there is far better authority than this, and of such a character that none acquainted with the source will for a moment question. It is from the celebrated and well-known chemist and toxicologist, Dr. Edward R. Squibbs, of Brooklyn, New York, who has for a long life time made this branch of our profession a special study, and whose opinions on such subjects for twenty years have been acknowledged as the highest authority in America and Europe. He says in a private letter on this subject, written to me: "I cannot believe that any fermentation can occur in any mixture of milk, eggs and sugar, within thirty-six hours, in either tin or earthen vessels, or under any ordinary circumstances, that could at all account for symptoms of acute poisoning in persons who had eaten it—the mixture. There is nothing in the present state of knowledge in the process of fermentation to warrant any such conclusion, nor anything to warrant the supposition that any germs formed in such mixture within the time mentioned, or indeed in any length of time compatible with the mixture being in an edible condition, could be poisonous or be developed into poisonous animalculæ."

After which, on this point, he further asserts:

"You may justly infer from this that the present state of knowledge, so far as I am acquainted with it, will not justify nor in any degree support a conclusion that any mixture of milk, egg, sugar and common salt, flavored with essence, can under any circumstances cause symptoms of acute poisoning while yet in a condition to be tolerated as human food."

Can the use of words or expressions put the case any stronger? This opinion of Dr. Squibbs was written with all the facts before him, as well as the article of Dr. Cheatham and the reported opinion of Dr. Mattauer, as published in the local columns of the Macon *Telegraph and Messenger*, and in perfect accord of my own opinion, as stated at the time to numerous persons of the city, who had very carefully read the statements of both these celebrated physicians as published. Then the question arises, where will we find the true source of the causes of this accident? We must certainly search for it outside of anything found in the fermentation process. One thing we can be sure of—that there is no danger of trouble from "germs" or "microscopic fungi," called by these hideous names, "sarceni ventriculi" and "torula cerviscæ," as the results of "fermentation," either "incipient" or otherwise. Ice cream behaves to-day just as it did in all by-gone ages, when no such creatures were heard of as inhabiting the custard, before, during or after freezing and taking it into the human stomach. But I hope, before concluding, to direct your attention to circumstances and conditions, which, if properly observed, will prevent such trouble as we have witnessed, and perhaps save life, and which will account for the unfortunate accidents in these families. I could produce numerous authorities for sustaining my position, but will cite only one other in this connection.

I also corresponded with S. P. Sharples, M.D., State Assayer of Massachusetts, and chemist at Harvard University, at Cambridge, who says, after carefully studying the published statements of Dr. Cheatham and Dr. Mattauer:

"The explanation of Dr. Mattauer of a well-known fact is hardly tenable, I think, in these cases."

"Taylor on Poison" says milk is subject to be affected by diseases in the cow, and it acts like an emetic, producing vomiting and violent symptoms, and reports three children who ate milk at breakfast, and were attacked with violent vomiting and pain, with blood in the ejected matter, when poison was suspected; but the proper test failed to find any, when it was discovered the milk was from a diseased cow. "Milk cannot possibly contain, by any properties of its own, anything to produce such violent symptoms."

The reporter of the Macon *Telegraph* stated, in the cases of Dr. Mattauer (Seymour's family), that "the fact that the custard in this instance stood overnight in an earthen vessel, not in a tin one, explains the theory of lead poison." Dr. S. says on this point: "The fact of lead poisoning is greatly strengthened. The remark that the custard was kept in an earthen vessel, and therefore there could be 'no lead in it,' I should take decided exceptions to, as lead glaze in earthern vessels is the most common source of poisoning."

I was surprised at the time when this argument was used against the idea of lead poisoning in the first cases. Dr. S. further says, in referring to the cases at Miss Gregory's:

"Another thing I should be very suspicious of, is the lemon flavoring which was used in double quantities," which greatly increases the probabilities of lead accounting for all this trouble, and which I shall again notice.

These authorities are sufficient to destroy the theory of "germs" or "microscopic fungi," accounting for the source of the poison as emanating from the process of fermentation. If this were true, these accidents would be of daily, if not hourly, occurrence. It is impossible. Then we say that the lead contained in the custard can alone give a proper solution of the mystery, the second case strengthening this conclusion. . Besides, lead was found in the custard of the first case by at least two chemists, but in very small quantities. But we well see what very small and minute portions are referred to produce the most violent symptoms. Unfortunately, as before remarked, the conditions for discovering the causes properly and certainly were overlooked at the time. An inquest would have brought out all the facts. As yet, our knowledge on many of these points is quite imperfect, consequently these cases have excited far more interest than many are aware of among medical men at a distance. As an instance of our imperfect knowledge, we find that poisoning by imperfectly made cheese is well known, though the best authorities are not agreed as to the cause of it. Also in regard to the action of the essential oils on persons we have but little knowledge. On many persons the use of the common flavoring extracts produce very unpleasant symptoms, as thirst, acute pain and spasms of the stomach and bowels, with eructations and purging.

I will now, as briefly as possible, discuss what, in my opinion, was the true cause of the poisoning in these cases, and which I will sustain by undoubted authority. I have already referred to the dangers of hasty conclusions—the liability to be wrong, and the importance of complete analysis before expressing any opinion—and that the most learned chemists and toxicologists have made errors, which is more the evidence of an intricate science, requiring close scrutiny, than of ignorance on the part of the operator or investigator.

If you will read carefully "Taylor on Poisons," article on Lead, you will see the extreme care necessary to be taken in testing for this poison, and the very minute quantity of it necessary to produce all the ill effects of the poison, even in quantities so small as "not to be written in decimals," as was stated to be found in one of these samples of ice cream custard.

Lead, as an accidental ingredient in articles of food, may be found in liquids used for culinary purposes, especially if they contain a free acid, and are liable to become impregnated with oxide of lead, derived from the glaze of the vessel in which they are kept, and thus form poisonous salts—more especially if vinegar is used, forming the acetate of lead.

Litharge-glaze is easily dissolved by acid, alkaline or fatty substances. All newly glazed vessels yield a larger or smaller proportion of lead on boiling in them pure acetate acid, or a solution of potash free from lead. In this manner the poisonous nature of the glaze may be tested, the oxide of lead being dissolved in the acid or alkali.

Lead may be an accidental ingredient in distilled water, in the waters of the essential oils, as well as in certain medicines. Some of these acquire an impregnation of it in the process of manufacture, when leaden vessels are used in their making.

Solutions of alkaline salts, kept in flint glass bottles in the drug stores, generally contain lead. The alkalies, potash and soda, the carbonates and bicarbonates, the alkaline silicate, phosphates of soda, and some others, are thus rendered impure by the quantity of lead contained in them.

Mr. Proctor, of New York, mentions a case of some novelty in reference to the contamination of food with lead. Four men partook of a rhubarb pie and milk for supper. Shortly after, they were all seized with violent vomiting and purging, and intense thirst and colic pains. A portion of this vomitted matter and food were examined by Mr. Proctor, and lead was detected in them. The only source the lead could be traced was the litharge glaze of the pans in which the milk was kept.

Beer and cider have produced ill effects, not from "fermentation," "incipient" or otherwise, but because of the leaden pipes used in its manufacture, and being acid, is allowed to remain too long in them, acquiring an impregnation of lead. Especially may this accident happen to cider, which is a highly acid liquid, and leaden vessels are generally used in its manufacture. This should be remembered by cider drinkers, because many fatal cases have been reported from this cause. The remedies will be at once recognized if these facts are not forgotten. When a test is desired, remember that liquids of this class are affected by the oxide of lead, and may be easily discovered by being turned, more or less, of a brown color by sulphide of ammonia, or by sulphuretted hydrogen.

Pork is often poisoned by being salted in leaden vessels and allowed to remain soaking in the brine. The effect is to impregnate the pork with chloride of lead, derived from common salt (chloride of sodium).

Flour has produced fatal results in consequence of the grinding machinery of the mill being repaired with lead cement and covered with paste, the latter being worn away and the lead exposed and mixed with the flour in grinding. All millers should remember this, as it is a common thing with millers, even in balancing their rocks, to use lead. No doubt many have lost their lives from this cause, without suspicion of the source. "Taylor on Poisons" reports that during the year 1866 whole families were poisoned in one district, in New York, by using flour manufactured at a mill where the miller had been in the habit of filling up cavities in the mill stones with lead.

Salt, butter and sugar have been poisoned by lead in their preparation. Snuff and tobacco are frequently adulterated with lead, to the extent of causing symptoms of chronic poisoning. The red oxide and the chromate of lead are the compounds used, the object of the adulteration being to improve the color and the saleable value of the snuff, at the expense of the health, and may be life, of the customer. This noxious adulteration has often produced paralysis and other forms of lead poisoning to the devotee of "the stick and bottle." Out of forty-three samples of snuff examined by Dr. Harrall, of London, chromate of lead was detected in nine, and oxide of lead in twelve. This subject has been lately investigated by Dr. Meyer, of Boston, and the results were most unsatisfactory for "snuff-dippers."

Apart from this wilful adulteration, snuff and tobacco are liable to be thus impregnated from being kept in vessels and wrappers made of lead, or a spurious alloy of lead, called "patent tin-foil." It is dangerous to buy and use tobacco packed in leaden wrappers. I have spoken at length concerning snuff and tobacco poisoned with lead, because they are in such universal use; and apart from the destruction of health resulting from the pernicious effects of these articles on human health, even when pure, how much greater must be their baneful influence when poisoned by so subtle an agent as lead, and requiring such minute portions to destroy health and even life. I hope these hints and cautions will attract the attention of those who indulge "in the weed," and good may result from the discussion.

Chocolate is sometimes packed the same way; also, preserves, fruits, wines, pickles, etc., are often put up in jars and bottles in which lead and tin are employed in the form of a screw cap, as a patented substitute for corks. On examination, the contents have been found strongly impregnated with lead. In France and England these articles, thus prepared, carry with them certain penalties, and properly—where the public health is more a subject of legislation than in the "best government the world ever saw;" for in Georgia, the "Empire State," a contracted and over conscientious legislature brutally repealed the most important bill ever passed in the State for the protection of the health of its citizens. I refer to the "Board of Health." No greater error has been made in legislation. The Georgia Medical Association worked and waited patiently for this bill to become a law, and the lamented Nottingham spent his best days in impressing on the legislature and his professional brethren the importance and value of this bill; and the very last effort of his valuable life was in furnishing most valuable papers to the Board of Health on this subject, of which he died an honorable and valuable member.

To return. The rule for determining this spurious tinfoil is simple, and any physician or druggist can do it; and I would advise all persons who use these articles thus put up, to get their physician or druggist to make the test. I will give it, for convenience, though I presume all know it: Add to two ounces of water one drachm of sulphuric acid and one and a half drachms of nitric acid. Plunge a strip of the foil into this mixture. The tin is soon oxidized and removed, and the lead appears under its true color and with its usual properties. It will be thus seen if it constitutes the greater bulk of the alloy.

I might go on and discuss the impregnation of water by lead, passing through leaden pipes, but have not space or time. In all articles of diet no cause has been so fruitful of trouble as a source of poisoning, as lead. Then all lead contaminations are objectionable, and no degree of it can be considered safe. Lead is a cumulative poison, and affects some persons most powerfully in the smallest quantities, in consequence of unfortunate idiosyncracies. I feel constrained, before quitting this part of the subject, to caution the public against an evil practice which has lately sprung up, of substituting for block tin a cheap alloy of tin and lead, in the so-called tinning of iron and copper utensils.

Also, not an unfrequent cause of accidental poisoning, is the use of copper vessels for culinary purposes. All the salts of copper are poisonous. The symptoms do not appear as in lead poisoning under four or five hours, or even longer, after exposure. The symptoms are great nausea, severe colic pains, cramps and purging.

An important rule to be remembered by all housekeepers is, no acid, saline (salty), fatty or oily liquid should be prepared as an article of food in a copper vessel. (See Aund's Hyg., 1832, vol. 1, p. 102). The preparation of fruits, such as preserves, in copper vessels, is necessarily attended with great risk. Copper vessels should be lined with pure tin, but if cleanliness is adopted, the risk is greatly lessened. The wearing away of the tin must be carefully watched, as danger lurks under it. Accidental poisoning has been produced by the use of so-called German silver, which is an alloy of copper and zinc with nickel, and properly should be called white brass. When spoons of this metal present greenish-colored spots in contact with butter and vinegar, they are liable to poison.

Many of the green pickles sold in the shops are impregnated with the vegetable salts of copper (blue vitriol) for the purpose of giving them a rich green color. An easy and sure test of this fact is to immerse a bright needle (common sewing) into the pickle,.when it will be speedily coated with copper. I would then advise all ladies, when they go to purchase pickles, to take a bright, polished needle and test them as above.

To conclude this already too long paper, I will repeat, that the difficulties in the way of arriving at a positively satisfactory conclusion as to the cause and nature of this poison, communicated through the ice cream consumed by the parties who were poisoned, have already been referred to, in the fact that those medical gentlemen who have expressed themselves, had all the conditions under which the cases occurred, except the most important ones, namely, "a chemical examination of the ice cream eaten and the matter vomited, and the *post mortem* appearances and chemical examination of those who died"—no opinion being worth much without these. Consequently, I have mainly attempted to meet and controvert the "germ theory" advanced by Dr. Cheatham, and slightly modified by Dr. Mattauer, both gentlemen of character and admitted skill in their profession, and to urge my own theory of the most probable cause being the lead contamination which was contained in the ice cream custard. I have sustained my position by giving the opinions of Dr. Edward R. Squibbs, of Brooklyn, New York, which is considered and acknowledged to be more valuable than any other toxicologist in America, and also has no superior in Europe. Dr. Squibbs asserts most positively, with all the facts before him, including the articles from the *Dawson Journa* and *Macon Telegraph and Messenger*, that "there is nothing in the present state of knowledge of the process of fermentation to warrant any such conclusion," (as advanced by Drs. Cheatham and Mattauer) "nor any thing to warrant the supposition that any germs formed in any such mixture (of eggs, milk and sugar) within the time mentioned, or indeed in any length of time compatible with the mixture being in an edible condition, could be poisonous, or be developed into poisonous animalculæ." Language cannot be more expressive of certainty—not a shadow of doubt, even.

I also quoted from a letter written to me on this subject by Dr. S. P. Sharples, State Assayer of Massachusetts and Professor of Chemistry and Toxicology at Harvard University, Cambridge, in which he says: "The explanation by Dr. Mattauer of a well known fact, is hardly tenable, I think," proceeding to give his reasons, too lengthy to be quoted here. He thinks the circumstances all point to the "lead theory," or contamination, as accounting for the trouble. I have quoted, also, freely from "Taylor on Poisons," a standard work on the subject, both in America and Europe, all of which, in my humble opinion, fully sustains my position on this subject. I have digressed from the proper discussion of the subject to state some practical facts, hoping thereby to instruct and caution those who take delight in the culinary department, concerning the use of certain culinary utensils of modern manufacture.

In conclusion, I will state I have expended much time and thought in the investigation of this subject during the past three months, both on account of its imperfect investigation at the time of its occurrence, and for the defense of myself as to my professional connection with the cases in the boarding house of Mrs. Gregory, growing out of the various conflicting and ridiculous reports which have been extensively circulated and freely discussed in this and other communities.

If I may have said anything to throw "more light" on this subject, or to instruct our housewives concerning the dangerous results from the use of culinary vessels of tin, copper or glazed earthenware, where a fatal poison may lurk unknown and unsuspected, ready to be brought into life and activity by contact with certain substances, I will be sufficiently compensated for the time and labor devoted to the preparation of this paper. It is a very important subject, and should attract more attention than we have been accustomed to devote to it. Then let us learn a lesson from these cases, and the constantly recurring ones weekly reported in our newspapers, and give more attention to the character of our culinary apparatus. It is no unusual thing to read in our morning paper the startling intelligence of a family suddenly attacked with severe and dangerous symptoms after partaking of a meal; but no further investigation than to determine if there is any criminal intent—especially if all recover. We do not know how many valuable lives are yearly sacrificed, and how much precious health wrecked by those insidious poisons which find their way into our food through these sources, and are attributed to accidental or other causes, if any conclusion at all is arrived at or considered. I have no doubt but much of the paralysis and other suddenly severe diseases we so constantly hear of and are called on to treat, and which of late years is attracting so much attention from prominent physicians, if fully and carefully investigated, could be traced to the culinary department for their origin. It is well known by observing medical men, who have practiced medicine during the past twenty-five years, that in the days of our fathers and grand-fathers, when the people had only the old iron pots and skillets and other rude implements, with the old familiar "pot-racks" and open fire-places to cook their food, and when the sound of the pestle and "biscuit block" could be heard throughout the town, operated by the muscles of the old cook woman, and when our food was prepared and preserved alone by the agencies furnished by nature, that our people had stouter constitutions, and lived out their allotted days of three score and ten years, with "*sana mens in sano corpori*," and that paralysis, softening of the brain, neuralgia, and the long list of chronic maladies, whose names are now "legion," was scarcely heard of. But "*O, tempora, O, mores!*" these latter days of cooking stoves, run by steam, by gas, and by coal, with their attractive and numerous paraphernalia of patent accompaniments, all bright and shining, nickel-plated, lithrage-glazed, German silvered and white-brassed, etc., to say nothing of the modern means of preparing and preserving meats, fruits, vegetables and other articles of diet, robbing nature herself of all part in these processes. Here we find abundant cause for our manifold troubles and misery, and what an unexplored field looms up for the philanthropic and enterprising physiologist—for the industrious members of the "Boards of Health," the conservators of the public health, and for our legislators, who should care less for self-aggrandizement and emolument, and more *pro bono publico.* But this subject is too vast for discussion in a paper like this. Those who would live long and be happy, if wise, will profit by these hints.

OPIUM IN HERNIA.

By A. COUVERT, M.D., Oxford, Ga.

Although for many years a practitioner of medicine in its several branches, I have avoided surgery as much as possible, except in its minor operations, under the belief that no one can attain to much eminence in it outside of a great city, with the facilities there afforded. Nevertheless, I have had to treat some grave cases occasionally, two of which I will briefly report.

Many years ago I was called on by a young physician, a former pupil, to visit a negro boy eight or ten years old, who was suffering from strangulated inguinal hernia. All of the usual measures had been repeatedly and unavailingly tried. Giving a heavy dose of laudanum, I left to prepare my instruments and refresh my memcry for the unaccustomed operation. On my return, after two or three hours, and arranging everthing *secundum artem,* we were about to try taxis again before the knife, when lo! to our surprise and gratification, there was no hernia to reduce. Spontaneous reduction had taken place, and our patient was sleeping profoundly. "Well," said I, "John, we have cured the hernia, but killed the nigger." Not so, however, for he was soon as well as ever.

Some years after the foregoing case occurred, I was called to meet, in consultation, several physicians of experience and reputation, who had under treatment a negro man of about thirty-five, who had been long the subject of inguinal hernia, which recently became strangulated. All usual means were frequently used, and as often failed. Anæsthetics did not then command the attention and confidence that they now do. The knife was decided on, preceded some hours by one grain of morphine, added to large doses given a short time before. When we met to operate two or three hours later, spontaneous reduction had occurred, and a speedy recovery followed.

I think it is an axiom, especially in this department of surgery, that when an operation is necessary, the sooner it is performed the better. I have seen a number of cases of hernia that seemed to call for the knife that were, happily, otherwise relieved. In the foregoing cases, I was within an hour or so of operating, but relief without the knife came within that time. Had I operated, it would have been unnecessary, as the sequel showed. Doubtless there are many cases that require an operation, and many fatal only from delay. Whether to act promptly or delay longer may sometimes be a difficult question for the surgeon to decide.

A distinguished Southern surgeon said, a few years ago, that he had never operated for hernia but once, and the great Liston said in substance that the glory of modern surgery consists more in the avoidance than the performance of operations.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

J. G. WESTMORELAND, M.D., REPORTER.

ATLANTA, GA., January 14, 1878.

Dr. J. F. Alexander, President, in the chair.

Dr. A. W. Calhoun read an Essay for the month on "The Influence of School-life on Eye-sight."

Dr. Baird asked why reading, while in the recumbent position, is more injurious than the upright posture?

Dr. Calhoun replied that the horizontal position tended to increase of blood about the head and eyes, which, with the congestion consequent upon the act of reading, proves injurious by leading to softening of the tissues, and finally, if constantly practiced, to partial paralysis of the retina.

Dr. Baird thought the position of the book, causing the light to strike it at an unfavorable angle, is, perhaps, the main source of trouble from this mode of reading.

Dr. Calhoun accepted this as one of the sources of trouble.

Dr. Taliaferro reported the case of a lady thirty-five years old, who had fallen from the door steps upon the buttox, producing considerable concussion. This was succeeded by persistent stricture of the bowels. Epsom salt was administered before he was called to the case, and the contents of the lower bowels had been evacuated. After this, castor oil was given in large quantity, without other effect than its rejection from the stomach. Injection of water with a Davidson syringe was then had to the full extent that was possible. Not more than a quart or two of water, however, could be forced into the colon. The patient did not seem greatly disturbed with pain or constitutional depression, and it was thought advisable to give an active cathartic, and croton oil to the amount of four or five drops was administered without purging effect. Chloroform was inhaled during the injection of water, with the hope of making a more successful filling of the bowel, but without realizing any advantage from it. Opiates were occasionally given, and with the effect of keeping the patient comparatively free from pain. Calomel—saccharated and plain—was given at several times during the treatment. About a week from the accident of the fall, and supposed consequent obsruction, the passage of fecal matter baving ceased for at least four or five days, as a last resort, forcible injection of water was repeated, without the ability to introduce more than a few pints. The patient gradually declined, and died about the tenth day of the obstruction.

Considerable discussion was had by members in regard to the location and nature of the obstruction in this case.

Dr. Taliaferro himself was inclined to the opinion that the cœcum was the point of difficulty, from the existence in that region of occasional pain and a rather firm tumefaction. At the same time, the small quantity of water retained in the bowel would seem to favor the idea of stricture lower down in the large bowel, as the small amount of water that could be injected was not sufficient to fill the whole colon. It had been ascertained by exploration of the bowel as high as the sigmoid flexure of the colon, by introduction of the hand, that no scybala or other cause of obstruction existed in that part. While he attributed the obstruction to the fall, he could not well understand why it affected the bowels, or what manner of derangement of the bowel was produced by it, leading to such uncontrollable obstruction.

Other members agreed with him in supposing vertical concussion from the fall led to the difficulty, but were also unable to give a satisfactory explanation of the effect upon the bowel.

Dr. Rauschenberg thought the introduction of a flexible tube through the sigmoid flexure might have proved more successful in forcing a larger quantity of water into the colon.

Dr. J. M. Johnson favored the flexible tube, and alluded to the successful treatment of other cases by this means.

Dr. J. T. Johnson could not understand how the tube could possibly facilitate the passing of water into the colon, as the pressure from the pump would certainly drive the water through any part that the tube would pass.

Dr. J. G. Westmoreland thought the obstruction existed not far above the sigmoid flexure, and was forced to this opinion from the small quantity of water that could be injected. He was of opinion that such cases should have the abdomen opened when all other means had failed to remove the obstruction. When asked his opinion of the nature of the obstruction, he expressed his belief in the possibility of invagination of the colon in the neighborhood of the sigmoid flexure, probably, from the sudden, violent vertical concussion in the fall.

Dr. J. G. Westmoreland reported improvement in the case of abscess of the inguinal canal, operated on a few weeks since. The discharge has nearly ceased, and the improvement in strength and general appearance is marked.

Adjourned.

ATLANTA, GA., January 21, 1878,

Dr. J. F. Alexander, President, in the chair.

Dr. A. W. Calhoun presented the specimen of a melanotic cancer, in the person of a young man twenty-four years old. The history, as given, is that a point of disease was discovered through the pupil some three or four years since. The disease continued, and when he was presented the whole orbit was filled with the cancerous growth; so much so that the extirpation was with difficulty effected. It was found that the optic nerve was the subject of the same melanotic cancerous degeneration, even to the optic foramen, where it was clipped. The prognosis is unfavorable, therefore, as the cancerous condition doubtless exists within the cranium. The case seems to be doing well, however—now four days since the operation—and but for the extension along the optic nerve would give hope of recovery. Again, the history of cases of this disease, commencing, as this did, in the retina, leads also to unfavorable prognosis.

Dr. Alexander, the President, asked of members whether they had met with scarlet fever in their practice. He had met with a case, the patient of another physician, the disease having been contracted in Florida. The question was raised in connection with this case, as to the nature of the eruption in scarlet fever, compared with that found in diphtheria. Dr. Alexander thought the characteristic symptom of scarlatina, and one almost amounting to a pathognomonic, is that of discoloration of the reddened surface by passing the hand over it. He, however, with some other members, had found the eruption to exhibit roughness to the touch, resembling fine sand under the fingers.

Adjourned.

ATLANTA, Ga., February 4, 1878.

Dr. J. F. Alexander, President, in the chair.

Dr. A. W. Calhoun reported a case of epithelial cancer of the cornea, in a lady some fifty years old. The case required enucleation, which operation was made two days ago. The case is peculiar, in that this kind of disease rarely commences in the cornea. At first simple ulceration was supposed to be the only trouble, but more thorough investigation proved its malignant character. The case has been under treatment about one month, and showed the first symptom of disease six months ago.

Dr. Calhoun also referred to the production of cancer by cauterizing the conjunctiva with nitric acid and nitrate of silver for pterygium. Some months since the opinion of such result was expressed by Dr. C., and attacked by members who were of the opinion that cancerous disease is not the result of the cauterization, but occurs on account of the germ or cancer cell existing previously. He had a case recently which, beyond doubt, occurred from the same application of the nitrate improperly in a case that would otherwise have terminated favorably.

Dr. Baird reported an unusual case of dislocation of the inferior maxilla from a spasmodic contraction of the muscles of the face and neck. The patient had been the subject of paralysis of the right side from cerebral embolism, but had recovered for some months before this attack of convulsive or spasmodic action about the face, which resulted in the dislocation.

Dr. Baird called up the subject of inflammation of the tonsils, and mentioned a case with which he had met recently. He has found great difficulty in getting the mouth open sufficiently to inspect the part inflamed. He desired the experience of members as respects this difficulty.

Others had similar experience in this particular. Dr. Calhoun found the laryngiscope useful in making such examination, and advises incisions made in the tonsils before and after suppuration has been established.

Adjourned.

ATLANTA, GA., February 11, 1878.

Dr. J. F. Alexander, President, in the chair.

Dr. W. F. Westmoreland reported an operation for stone in the bladder, by median cut. The case had been operated on several months ago for stricture of the urethra, by perineal section, from which a clot probably was left and served as a nucleus for the stone. The subject, fifty years old, and now second day from the operation, is doing exceedingly well. This is the first operation by the median section he ever made, and it was performed by cutting through the perinæum, commencing on the median line an inch from the anus, in the direction of the membranous portion of the urethra, into which a director had been introduced. The cut was made through the membranous portion alone, without cutting the bulbous portion or neck of the bladder. After dilating the neck of the bladder with the finger, a small pair of forceps was introduced, and a stone somewhat kidney-shaped, an inch long and half an inch in diameter, was extracted.

Adjourned.

Selections.

VIBURNUM PRUNIFOLIUM AS A UTERINE SEDATIVE.—It was not my intention to bring this remedy before the notice of the society until my own experience in the use of it was much larger than at present, but as it has proved so very satisfactory and efficacious in the cases in which I have used it during the past two months, probably others who have more frequent opportunities than myself may be induced to give it a trial, and report to the society, at some future meeting, the result of their experience with it.

In the following cases, the viburnum was used with benefit:

October 28, 1877, 9.30 P.M.—Mrs. D., aged 28, last child 18 months old, which she continues to nurse, menstruated last from 24 to 28 august, was taken with pains and uterine hemorrhage about 6 o'clock in the evening. Os dilated sufficiently to allow one finger to pass; blood came freely in gushes at intervals of about three minutes. Ordered half a teaspoonful of the fl. ex. viburnum every half hour until hemorrhage was checked. After the third dose there was no more hemorrhage, it having gradually diminished after the first dose. She continued one-half teaspoonful three times daily for three or four days.

October 17, 1877.—Mrs. R. C., in the seventh month of pregnancy, had been flooding profusely for four or five days. Ordered fluid extract viburnum ℥i to be taken at once, ʒss every half hour until checked. The hemorrhage was entirely checked after taking a few doses.

In two cases of menorrhagia, in which the menses had always lasted seven or eight days, they were decreased to five days, and were much diminished in quantity. In these cases the viburnum was taken in ʒss doses three times daily.

September 14, 1877.—Mrs. H. E. B., aged 30, in the seventh month of her second pregnancy, for the past two months has had almost constant headache, associated with insomnia, impaired vision and vertigo. Œdema of the face and of the upper and lower extremities, frequent nausea and vomiting, mouth and tongue very sore and excessive ptyalism—urine highly albuminous. Was treated for the albuminuria, which gradually diminished, and in about a month was altogether absent. She was now entirely relieved from the headache, vertigo and œdema, but the ptyalism, sore mouth and tongue were, if anything, even worse than when I first saw her. None of the usual mouth washes for this complaint seemed to give her any relief. She used chlorate of potash, borax, bismuth, slippery elm infusion, emulsion of bitter almonds with hydrocyanic acid, belladonna, etc.

About the first of November she commenced taking ʒss of the fluid extract viburnum every three hours. Her mouth soon commenced to get better, and in less than a week gave her no more trouble.

My attention was first called to this remedy by a paper which I had the pleasure of hearing read by Dr. Edward W. Jenks, of Detroit, Michigan, before the American Gynæcological Society, in New York, in September, 1876.

Dr. Jenks said he had used the viburnum during the past ten years in a great number of cases of threatened abortion, and that he now relies upon it as the most efficacious remedy we have for this trouble. He recommends it especially in those cases where abortion has become habitual with a woman. He also recommends it as a valuable therapeutic agent in the treatment of the sympathetic disorders incident to pregnancy, where a nervine or sedative is demanded. He also says that he has found it extremely useful in a large class of non-puerperal diseases of women, especially in all uterine disorders characterized by loss of blood, such as menorrhagia, metorrhagia incident to the menopause, and in all forms of dysmenorrhœa attended with profuse menstruation.

The attention of the profession was first called to the uses of the viburnum by an article written by Dr. Phares, of Newtonia, Mississippi, which was first published in the Atlanta Medical and Surgical Journal, in 1866, and subsequently republished in the Detroit *Review*, December, 1866, and in the Boston *Medical and Surgical Journal*, October 10, 1867.

Dr. Phares attached particular value to this remedy for the prevention of abortion. He designated it as a "nervine, antispasmodic, tonic, astringent and diuretic," and adds: "But it is particularly valuable in avoiding abortion and miscarriage, whether habitual or otherwise, whether threatened from accidental cause or criminal drugging. It tones up the system, preventing or remov ing those harassing nervous symptoms that so often torment and wear down the pregnant woman, and disqualify her for the parturient effort. It enables the system to resist the deleterious influence of drugs so often used for the purpose of procuring abortion."

He also alludes to the habit, common among negro women on many of the Southern plantations, of taking a decoction of gossypium, or cotton root, for the purpose of procuring abortion, and says: "Some farmers on whose plantations I have used the medicine, and who have seen much of its effect on negro women who had always managed to miscarry, declare their belief that no woman can possibly abort if compelled to use the viburnum."

Of course, no intelligent physician expects that when an abortion is fairly begun by detachment of the ovum, or when a portion of it is extruded from the uterus, any remedy or treatment will prevent its ultimate expulsion; the mischief is already done; the vital connection of the fœtus with the mother is destroyed, and no measure can preserve its life.

In order to determine in what cases this drug acts as a means for preventing abortion, we may very properly consider the causes of abortion under the four following heads:

1. *Those that are accidental.*—Violent mental emotion; sudden agitation from fright; great bodily fatigue, with mental anxiety and severe pain; hysterical convulsions, blows, falls, irritation of mammary nerves, lactation and constant suckling, railway traveling, drastic purgatives, placenta prævia, etc.

2. *Those that are due to some deranged state of the mother's health.*—Acute thoracic and abdominal diseases, albuminurea, uræmic convulsions, measles, scarlatina, small-pox, obstinate constipation, syphilis, intermittent fever, etc.

3. *Those that can be traced to some morbid condition of the uterus or its appendages.*—Adhesions of the uterus to other pelvic organs, retroversion of gravid uterus, etc.

4. *Those that arise from disease of the embryo or its membranes.*—Small-pox, cholera, scarlet fever, hydrocephalus, knotting or compression of the funis, placentitis, fatty degeneration, hypertrophy, induration, calcification or ossification of the placenta, and syphilis.

It is in the first class, those that are accidental, that viburnum, by arresting the contractions of the uterus, which serve to separate the utero-placental attachments, and by modifying the placental and utero-placental circulation, acts so favorably as a uterine sedative in preventing threatened abortions. In the second and third classes, it might be a valuable adjuvant to other appropriate treatment, especially in cases of retroversion of the gravid uterus. But in the fourth class, where the abortion is caused by disease of the embryo or its membranes, such as small-pox, scarlet fever, hydrocephalus, knotting or compression of the funis, fatty degeneration of the placenta or syphilis, the fœtus is generally dead some time previous to the threatened abortion, and of course no treatment at this stage can be expected to arrest it.—*Maryland Medical Journal.*

NITRATE OF PILOCARPIA.—Physiological action of the infusion of jaborandi is so powerful and clearly defined that it is astonishing how little its therapeutic value has been turned to account. Nevertheless, it must be admitted that the study of this energetic agent presents serious difficulties, from the fact that its leaves are often adulterated, besides being frequently ill preserved, as found in the markets.

The discovery and isolation of pilocarpia, the active principle of the plant, will enable us, however, to arrive at the therapeutic indication for this drug; furthermore, the patient will no longer be nauseated by the disagreeable taste of the infusion, nor can the different results be attributed to a difference in the quality of the medicine.

In the present article we will confine ourselves to the physiological effects produced by the absorption of the alkaloid, and later refer to the conditions in which the practitioner should avail himself of this most powerful modifier of the salivary and cutaneous secretions.

Our experiments were made at the Hotel Dieu de Caen; we used the nitrate of pilocarpia hypodermically, the dose being from two to two and a half centigrammes (3-10 to ⅜ grains). This salt is very soluble, and is therefore readily adapted to this form of medication.

The observations were made upon six patients, five of whom had some slight surgical trouble, and the sixth, a young man, suffered from phthisis pulmonalis. The following are the phenomena which we observed: one or two minutes, at most, after the injection, the patient felt flushes of heat in the face and a smarting sensation in the lumbar region; his countenance colored and his eyes were injected; a moment later, an abnormal secretion of saliva filled his mouth and caused him to spit for eight or ten seconds. The saliva is clear, watery and usually tasteless; sometimes, however, it is mixed with an abundant expectoration.

At the end of three minutes, small drops of sweat appeared upon the alæ of the nose; the brow presented nearly the same phenomenon; finally diaphoresis became general and sufficient to soil the mattress.

The thermometer placed in the axilla showed no elevation of temperature, 37° to 37½° (98 3-5° to 99° Fahrenheit). The pulse, on the contrary, was unsteady; in the space of ten minutes it rose to 140, only to fall in a quarter of an hour later to 75—generally it varied from 95 to 110.

In one case the heart palpitated forcibly, yet no murmur was heard.

Respiration was normal.

About ten minutes after the injection, three of the patients felt a desire to urinate; in each case the urine was diminished in amount, and the act of micturition caused a burning sensation in the urethral canal.

In every case vision was more or less disturbed, lachrymation was produced and sight was less distinct; objects appeared as though enveloped in a light veil.

As respects hearing, there was a sensation of buzzing and ringing in the ears, with beginning deafness. The digestive apparatus, with its attachments, also showed signs of disturbance; the tongue was slightly swollen and become painful at its base; there were nausea and vomiting, yet the latter was not abundant.

Thirty-five minutes after the appearance of the first phenomenon, the countenance was less flushed, the skin became cool, the extremities were cold, the limbs itched and the pulse was weak.

The patients were scarcely able to walk; they staggered and would have fallen, had they not supported themselves. The most feeble were completely exhausted, and, showing signs of stupor, they rested with their heads inclined over a basin receiving the saliva which, without effort, flowed from their mouths in abundance. Such are the curious effects which appeared in the first forty-five minutes, then little by little the secretion of saliva decreased, the perspiration become less copious, there was less feeling of malaise, and finally, at the end of an hour or two, everything had ceased.

The mean quantity of the saliva secreted by the patient was 500 grammes, (16 ounces) but in one case it even amounted to 900 grammes; the perspiation sufficient to saturate both mattress and covers.

The following fact is also rather peculiar: a woman received an injection of 0.025 milligramme (2-5 gr. nearly) of nitrate of pilocarpia in the arm; the above symptoms all appeared and passed away, but in the evening she had a second attack of sweating and salivation as abundant as the first. A soldier presented this same peculiarity, yet more strikingly, for in his case did the attack not only reappear in the evening, but also on the following morning, at an hour corresponding with the time of the injection on the day previous.

Such, then, are the physiological phenomena which we witnessed, and one can readily understand from the rapidity and certainty of action of this alkaloid, what position it will command in future therapeutics.—*L'Annee Medicale.*

SALICYLIC ACID AND SALICYLATE OF SODA IN THE TREATMENT OF ACUTE RHEUMATISM.—In the treatment of acute rheumatism with salicylic acid my experience extends over but one case, and in this the results were by no means satisfactory. Its failure in this instance may have been due, however, to the unusual malignancy (if I may apply this term) of the case. I will give a report of the case farther on. I was led to discontinue the use of salicylic acid and substitute for it the salicylate of soda in the treatment of this disease by having seen Prof. H. Kohler, of Halle, quoted as authority for the statement that "all the remote therapeutic effects of this remedy may be obtained by administering its salt—the salicylate of soda." The idea occurred to me that the salicylate would be even *better* than the acid, from the fact that in its use we would get the benefit not only of the salicylic acid, but also of whatever virtue there is in the alkaline plan of treatment. Sydenham, I believe it was, stated that the best treatment for inflammatory rheumatism was *six weeks*. Many high authorities since the days of Sydenham have doubted the usefulness of any medication for the *cure* of the disease, recommending only the use of opiates and liniments for the relief of sleeplessness and pain, and the use of placebos, such as peppermint-water (see Flint's Practice,) otherwise leaving the disease to the *vis medicatrix naturæ.*

The cases I have to report are as follows:

Case I.—On the 10th of March, 1877, I was called to see A. C., a little girl some eight years of age. She had a high fever, severe headache, some nausea, and complained of pain in all of her limbs. Malarial fevers were prevailing in her neighborhood to some extent at that time; and although the family did not know of her having had a chill, I supposed the case to be one of remittent fever, and gave her a mercurial purgative and full dose of quinine. On the 11th, in the night, I was sent for to see her again. Found that the mercurial had acted well, and that the quinine had produced distinct tinnitus aurium; still her fever was higher, and she complained of great pain in elbows, wrists and knees. On making an examination I found that the joints were enlarged and quite hot. I saw at once that I had a case of acute articular rheumatism. I put her immediately on the salicylic acid treatment, giving her seven-and-a-half-grain doses every four hours. I also ordered for her a dose of the sulphate of morphine combined with nitrate of potash, every three or four hours until she was relieved from pain. In spite of this treatment the disease continued to increase in severity; so that by the 14th the pain in her joints, except when she was under the influence of the morphine, was intense, and she could not be moved without suffering the greatest agony. The dose of the acid was now increased to ten grains. No effect, however, was produced upon the disease, and the case continued with increasing severity until the 20th, when she succumbed.

In this case not only the joints were effected, but the *muscles* also became involved, as did the conjunctiva; so that during the last days of the patient's illness her abdomen was distended from swelling of the abdominal muscles and probably inflammation of the peritoneum; also her eyes inflamed and her face so greatly swollen that no one who knew her in health could have recognized in her distorted features those of the same person. Dr. S. C. Edmunds and Dr. R. T. Clark saw this case with me several times.

Case II.—W. B., a little girl seven years of age, was taken ill on September 5, 1877. I was called to see her on the 6th. She had considerable fever, furred tongue, bowels constipated, and pain in limbs, but no swelling in joints. Malarial history. Gave her five grains of calomel with four of Dover's powder, and prescribed for her twenty-four grains of sulphate of quinine in eight doses, one to be given every four hours. I saw her no more until the 10th, when I was called upon to visit her again. Learned that she was greatly benefited by the prescription I made at my first visit, but to-day I found her pulse to be eighty-eight to the minute, skin moist; her left elbow and wrist were considerably swollen, as well as hot and painful. I prescribed for her salicylate of soda in fifteen-grain doses, one to be given every four hours. She began to improve within six hours, and I had the satisfaction of learning two days afterward that her rheumatism had entirely disappeared. She had no return of the symptoms.

Case III.—November 20, 1877, visited C. C.; joints hot and swollen, pulse ninety-six to the minute, skin moist, bowels somewhat constipated. Gave a mercucial purgative and ordered a half ounce of salicylate of soda in eight powders, one to be given every three hours. On the 23d her husband informed me that she was entirely free from pain, and was able to sit up or walk about the room. On the evening of the 24th, however, the joints of her right arm and leg were again inflamed and quite painful. I had the above prescription refilled, and before she had finished taking it she was entirely free from pain, and the swelling was gone. The symptoms returned no more, and she soon regained her usual strength.

CASE IV.—On December 28th of last year, I was called to see Miss M. D. Was told that she had been confined to her bed for fifteen days, most of the time suffering acutely with inflammatory rheumatism. During this time she was under the treatment of Dr. D., an excellent physician of this town, and I presume of course had the benefit of the best treatment known for her disease before the introduction of salicylic acid and its salts. Dr. D.'s business engagements outside of the profession were such that he could not attend to the case; hence it fell under my care. The joints of all her limbs were red, hot, swollen and extremely painful, she stated. She also complained of great pain in the region of the heart. The joints of the left side were affected somewhat worse than those of the right, but they were all so much involved, that she could not be induced to move either hand or foot or change her position in bed. Profuse perspiration was a prominent symptom in the case. I made for her the following prescription:

℞.—Sodæ salicylatis, . . ℥ss.
Div. in chart, ... No. viij.
S.—Give a powder every four hours.

This prescription relieved her of the *pain* from which she was suffering almost as effectually as opium would have done; and at my next visit, twenty-four hours afterward, I found her very weak, of course, but entirely recovered from all symptoms of rheumatism, except slight swelling of the articulations. I continued the same prescription, except that the interval between the doses was lengthened to six hours, until the 30th, when, the swelling having disappeared and the natural suppleness of the joints having returned, I discontinued all treatment except tonics for the improvement of the appetite and strength. She felt no symptoms of her disease, and did well in every particular until the 6th of January, when inflammation again appeared in the left wrist and in the carpal and metacarpal joints of the left hand, and the pulse became accelerated to eighty-six beats to the minute. I had her resume the salicylate in doses of twenty-five grains every four hours for twenty-four hours, when the symptoms had again disappeared. She took twenty-five grains three times a day for some three days more, when she was able to resume her duties as matron of a female college. Since then she has been in the enjoyment of her usual health, and has felt no symptoms of rheumatism.

CASE V.—On January 4th of this year was called to see L. H., a colored woman some twenty-five years of age. Found her suffering with all the symptoms of acute rheumatism, worst in the joints of her right arm, which it was impossible for her to move without suffering great pain. I prescribed for her the salicylate in doses of half a drachm every four hours. Two days later her fever had disappeared and the inflammation was gone from all the joints except the right wrist. I had this joint bathed twice a day with a stimulating liniment, and continued the salicylate in doses of twenty grains every six hours for some four days, by the end of which time she had entirely recovered.

CASE VI.—On the 15th of January, this year, I was called to see Mrs. A. J., whom I found suffering severely with pain in the joints of all her limbs. She was an extremely corpulent woman, and I could not detect any swelling of the joints, though she thought they were somewhat enlarged; they were certainly very hot. I diagnosed acute rheumatism and prescribed the salicylate in doses of thirty grains every four hours. This case yielded more slowly to the salicylate than any other in which I have used it. The medicine nauseated her somewhat, and she could not be prevailed upon to take it with any regularity. When she was suffering severely, however, she would take a dose of the medicine, and it was followed by almost immediate relief of pain—as she said herself, "just as if she had taken a dose of morphine." She continued to take the medicine in this way until the 21st of the month, when, as she was no better except when under its influence, I persuaded her to take a dose of the medicine regularly every six hours, in order to eradicate the disease entirely from her system. She took it for two days just as I directed, and at the end of that time she pronounced herself well, and she has continued so up to the present writing.

My success with salicylate of soda in acute rheumatism justifies me, I believe (in so far as I *can* be justified in forming conclusions from the small number of cases in which I have used it), in stating with reference to it what Dr. T. McLayan, in the London *Lancet*, and quoted in the *American Practitioner* of 1876, states of salicin, viz: . . "Given at the commencement of the attack, it seems to arrest the course of the malady as effectually as quinia cures an ague or ipecacuanha a dysentery;" and, I may add, it cures rheumatism much more effectually than ipecac. does dysentery in my practice; also, that "relief of pain is always one of the earliest effects produced." So much is this the case as applied to salicylic acid that in no instance where I have used this remedy have I had occasion to administer a single dose of opium or any other medicine of that class.

In the only case (Case IV) in which I began this remedy after the first few days of the attack, the patient had been ill fifteen days, and its results were as satisfactory as in any of the cases in which its use was begun "at the commencement of the attack."—*Louisville Medical News.*

THE RESPONSIBILITY OF THE PROFESSION IN THE PRODUCTION OF OPIUM INEBRIETY—*Read before the American Association for the Cure of Inebriates.*—MR. PRESIDENT, GENTLEMEN: In accepting the invitation tendered me, to present a paper at this meeting, I have thought it might not be undesirable to direct attention to one phase of a certain topic which I have before presented to the profession—New York *Medical Record*, January 29th and December 9th, 1876—and therefore beg leave to offer briefly some remarks on "the responsibility of the profession in the production of opium inebriety."

That opium is largely used, and that its use during the last two or three decades has increased far in advance of its direct therapeutical need, are facts which no one rightly informed will question. That its habitual consumption will give rise, in a large proportion of cases, to a disease having symptoms as marked and specific as many others coming under professional cognizance, is another fact indisputable; and that this addition to our nosology has failed of receiving from the profession that attention it most deservedly demands, is as true as it is regretable.

Passing at once to the main point involved in this paper, what is the chief factor in the etiology of opium inebriety? Is it a matter of choice, that its victims indulge in it for any transient happiness it may furnish; any seeming oblivion it may give to disturbing emotions; any intellectual stimulation it may occasion; or, is it that, once ordered on professional authority, and continued a time indefinite, it causes such changes, mental and physical, as to engender a constant demand for its taking, and thus gives over its users to a servitude most deplorable? Diversity of opinion exists on this point, though the vast preponderance of testimony favors the statement that, in a large majority of instances, it is involuntary; that patients, unaware and unwarned of its ensnaring property, continue it, unsuspectingly, until the morbid condition becomes established. Dr. Parrish says: "Men take it, not for social enjoyment, but for a physical necessity." Dr. Van Deusen remarks: "For the primary induction of the habit, the stated physician is so commonly responsible, that the onus probandi in exculpation rests upon him, by all fair presumption." A late German writer asserts: "The original causes of this diseased condition, and of its extension, are the doctors themselves, who have accustomed patients to resort to the use of injections for the relief of painful affections of more or less short duration." Another foreign authority, after detailing several cases of this disease coming under his care, all having their inception in an opiate prescription, observes: "This leads me to say that I think there are many cases of chronic disease, or disease in which sleeplessness is a prominent symptom, in which opium is frequently prescribed without any thought of this danger supervening, and which has led me to believe and practice that it is advisable not to give opium continuously for any length of time in these cases, unless in painful and incurable diseases, as cancers, etc., especially if the patient is of a nervous temperament. There is no doubt that pain or sleeplessness would more frequently have to be endured, but other remedies might be substituted which would, in part, though not entirely, take its place. And if we consider that it would save some, more, perhaps, than many are aware of, from contracting such a habit, I think that at least it would be advisable to consider this danger, and bear in mind, when we are called upon to treat such cases and believe opium to be indicated—a danger which most readers well know, from their own experience, not to be a fanciful one."

After referring to the strictures sometimes passed regarding the medicinal employment of alcoholic stimulants, he continues: "But it is otherwise with those I have mentioned, who have not known the potency of this drug, at least personally, until it was professionally administered, and who, in all likelihood, would not have known it unless so ordered. And this is generally the rule. I think that the majority of the habitual opium eaters have, in the first instance, acquired the taste for it after having been ordered it by a medical man; and in view of this danger, I venture to say that this ought to be borne in mind when we administer opium in these cases, lest we might be the innocent cause of setting the spark to the fire that may only be extinguished with life." My personal knowledge, embracing the history of quite a number of instances, is fully confirmatory of these opinions, and I hazard little in expressing a belief that eighty per cent. of the cases of opium inebriety in this country may be traced, more or less directly, to opiate prescriptions. This assertion may seem somewhat extravagant, but I challenge proof to the contrary.

Now, the question naturally arises, why so large a degree of professional responsibility? The answer is to be found in the fact of our being a people peculiarly susceptible to the seductive influence of this drug, by virtue of our strongly-marked nervous temperament; the extensive prevalency of neurotic disorders, very largely of hereditary transmission, thus presenting the most favorable field for reaping a generous harvest of those ills of body and mind which follow habitual indulgence; and in the other great fact that practitioners have been too lavish in the expenditure of opiates for the relief of pain, insomnia and general nervous disturbance, without first fully informing themselves, by careful inquiry, respecting previous history on all points likely to conduce to a full knowledge of the risks incurred by a somewhat prolonged administration. Again, I believe a large share of causative influence may be found in the neglect of proper care on the part of physicians to see to it, thoroughly, when the strict therapeutical necessity for the use of opium has been fulfilled, that their patients utterly abandon it. I am unhesitatingly of opinion that a want of careful attention to this point has led to the full development of the disease in very many cases where otherwise it might have been throttled on the very threshold of its existence. This especial feature as to prophylaxis assuredly demands the most serious consideration.

But while insisting that the fraternity has a responsibility on this point which it is useless to try to evade, I am willing to admit that an auxiliary factor of great importance is to be found in the absolute freedom from anything like requisite restriction in the sale of opium and its preparations. Nothing prevents an apothecary from refilling an opiate prescription as often as it may be presented; nothing restrains him or any other from supplying whatever demand may be created for opium. This is radically wrong, and with proper limitations should be prohibited. Many cases of opium addiction would unquestionably never pass beyond a mere inception, were it not possible for those in whom the seeds of the disease have been planted to procure further supplies, and by thus continuing to "sow the wind," "reap a whirlwind" of misery, mental and physical, which it is difficult fully to conceive.

Without desiring to enter upon any discussion as to the comparative liability of various opiate preparations to beget inebriety, I wish to call attention to one phase of this question which has excited no little comment, and certainly merits consideration. I refer to the use of the hypodermic syringe. That the subcutaneous administration of morphia has contributed incalculably to the alleviation of human suffering cannot be doubted; but it has been asserted that increased facility for continued indulgence is thus afforded, with largely augmented liability of establishing disease. I have been informed that a prominent member of this association entertains this opinion, and condemns its use, claiming far greater danger of inebriety, than if morphia be given per orem. He contends that the unpleasant gastric effects and cerebral disturbance which it so often occasions when administered per via naturale, constitute a decided obstacle to its protracted employment, whereas the trifling pain of the puncture, the freedom from disagreeable sequelæ just cited, and the, to many, enjoyable tranquility of mind and body it produces, prove almost irresistible temptations to its continuance. How far this opinion is correct I cannot say, but it may safely be asserted that, from the extensive prevalency of this form of medication, many cases will be found of this character, and that the number will constantly increase, especially if the pernicious practice—which I am impelled to believe is quite extensively indulged in—of patients being professionally advised to purchase a syringe and personally employ it—be continued.

An interesting paper on "Opium Inebriety, and the Hypodermic Syringe," by Dr. McFarland, of Oxford, New York, read at the last meeting of the New York State Medical Society, pointed out the danger of this course, and advised strongly its discontinuance.

Having thus directed attention to a state of affairs largely existing, what is the remedy for the resultant evils?

First. A diminished prescribing of opiates, a lessened idea that they are the *sine qua non*, and the substitution of various anodynes, soporifics, and nervines, which, though they may somewhat imperfectly accomplish the object, as compared with opium, are free from that peculiar property which so often entails dire results.

Secondly. In all cases where their use seems indicated, careful inquiry by the attending physician, as to the neurotic status of the patient, from the standpoint of hereditary tendency, by thorough investigation of ancestral mortuary records, and a study of individual temperament, with the object of ascertaining the vulnerability of each case to the exceptionally ensnaring power of opium.

Thirdly. In every case, as limited an employment of opium, and as frequent using of substitutes, as circumstances will admit, interrupting an administration at short intervals, if possible, and thus lessening the chances of habituation.

Fourthly. Patients under the necessity of using opiates should be kept under careful and frequent observation, and immediately the direct need for their use has subsided, the attending physician should exercise fully his authority in compelling a peremptory abandonment. Pre-eminently so is this with the hypodermic syringe, and under no circumstances, except the case of painfully incurable disease—and even then it would be better to entrust its use to a friend—should a patient be permitted self-administration. Personal employment is fraught with danger, patients almost invariably using it to excess, and the practice of allowing it cannot be too severely condemned, or its discontinuance too strenuously insisted upon. More, medical attendants should deem it their duty to follow closely the course of patients for some time after opium has been abandoned, lest, from some pretext, its use be resumed clandestinely, and inebriety become established. More than one striking case of this kind, in which it was employed hypodermically, has fallen under my observation.

Careful observance of these precautions would, unquestionably, reduce largely to a minimum the ills resulting from the indiscreet employment of opium, and I trust the time is not far distant when this Society will deem it advisable to express a sentiment in accordance therewith, confident that, could it make itself heard and heeded, a vast amount of harm might be avoided.

Nor can I allow this opportunity to pass without asking whether the time has not arrived when it is the duty of this association to direct attention to the indiscriminate sale of opiates, and take measures looking to its restriction? Certain it is that, despite every professional precaution which may be observed, an avenue for continued indulgence is now open, which individual as well as public interests demands should be closed. Certain it is that, so long as no safeguard is afforded those in whom the earliest indications of this abnormal appetency are aroused, so long will we have constant accessions to the ranks, already surprisingly large, of opium habitues.

I am firmly of opinion that legislative enactment, prohibiting the refilling an opiate prescription, or the dispensing of opium in any form, without a positive order from the attending or other physician, would accomplish an immense amount of good, by protecting those who. otherwise, might become the pitiable possessor of an appetite making alike havoc of mind and body.

A precedent has been given us. During the past year our German brethren, with a far-reaching wisdom which will bear good fruit in the future, have secured restrictive legislation in this direction, and the good example thus presented we should make no delay in emulating. I commend this subject to the earnest consideration of this association. As the pioneer in every movement having at heart the protection of individuals and society against the ravages of inebriating agents, an ample field is here afforded for the exercise of those wise counsels and benificent works so potent for good in the past, and so pregnant with weal for the future. The prevention of disease ranks higher than its cure, and in the entire realm of prophylactic medicine I know of but few better opportunities for brilliant achievements than this.—*Medical and Surgical Reporter.*

Pepsine and pancreatine have been considered only temporarily beneficial, but their permanent benefits are well known to those familiar with them as remedies. The New York Pharmical Association proportions them with the supposed necessary acids for use.

Editorial.

HOSPITALS.—Three Christian virtues have been compared, but in the comparison charity is the greatest of all. "Corporations," it is said, "have no souls," but as the people have souls, and are, or should be, represented by municipal legislators, why is it that all cities of twenty thousand inhabitants do not build and support charitable institutions in which the helpless poor can be properly cared for when sick? The people of Atlanta exhibit evidences of this greatest virtue by devoting time, labor and money to private enterprizes for this purpose.

The Medical College clinic affords useful aid in this way, and whatever may be thought of the incentives, it is certainly true that the free surgical and medical treatment of the poor, as furnished in the Medical College clinic of this city, is one of the most useful charities among us. In making this statement we do not fail to recognize the praiseworthy efforts in this direction of those connected with the management of that charitable and useful institution, "The Ladies' Benevolent Home." The noble ladies engaged in this good work deserve, not only the thanks of helpless sufferers, but of the whole community, in which so many of this class are to be found. Not only so, but the blessings of Heaven will most assuredly attend those devoted to such Christian duties. No; we would not detract in the least from the importance of this institution founded in Christian charity, nor from the honor and praise of those engaged in this noble cause of humanity. To the extent of the donations they can obtain, added to their own contributions of money, labor and time, do these indefatigable ladies ameliorate the condition of this class of our people.

The charities bestowed at the Medical College are afforded entirely at the expense of money and labor by the College Faculty. In addition to those confined to bed, for whom bedding and fires are furnished, a larger number of out-door patients, afflicted with chronic diseases, are treated, than by the city physicians and all other charities put together. An average of over thirty cases are prescribed for weekly, and the medicine, surgical appliances, etc., furnished at the expense of the College Faculty. One hour each day, and, sometimes, two hours are devoted to this public service.

With shame citizens of Atlanta are compelled constantly to confess before the world that our city of thirty-five thousand inhabitants has never had a hospital, except such as have been inaugurated and supported by private enterprise, with the view of meeting the more pressing necessities of the poor. The city authorities still refuse to expend money for this noble object, notwithstanding the fact that it has been clearly shown that, by accepting the private aid offered, a hospital sufficiently commodious to fill the demand, can be built and supported, without larger expenditure of money than is now, almost uselessly, made on account of the sick poor. Salaries are paid to five city physicians. The amount not being sufficient, alone, to support them, they are necessarily allowed to do private practice to an unlimited extent. Now, until human nature is changed, or some special providence actuates physicians individually, paying patients will not be neglected in behalf of the other class. It is not because city physicians are worse than other people, but because of the defective plan adopted by the city authorities to take care of their pauper population.

MEDICAL ASSOCIATION OF GEORGIA.—The annual meeting of our State Medical Association will be held in Atlanta on the third Wednesday, 17th of April.

The committee of arrangements had a meeting last week, and are stirring themselves to have everything in readiness, so as to give our medical brethren a hearty welcome and a good time generally.

Arrangements will be made to lighten the expenses of members by securing half-fare rates on the several railroads, and hotel accommodations at moderate rates.

The time being perhaps the most favorable during the year for physicians to leave their business, and withal the most pleasant season, we shall expect a large attendance.

These yearly reunions of the profession are not only pleasant, but profitable. Coming up from different portions of the State, all, as it were, are linked together in the same brotherhood, and interchange freely their views on subjects connected with the healing art.

The benefits of these meetings are not by any means confined to the medical profession. They constitute a source of advancement in medical knowledge from which public benefits are derived.

Usually a large amount of matter is introduced for the consideration and discussion of members, and we hope there will be no falling off this year. Reports from the various sections, voluntary papers and oral reports of cases afford a rich treat to lovers of medical science.

IN MEMORIAM.—Dr. L. P. Yandell, Sr., of Louisville, Ky., is no more! This patriarch in medicine died at his home, in Louisville, on the 4th of February, 1878, full of years and full of honors.

Says the Louisville *Medical News:* "Dr. Yandell died on the 4th of February, after a short illness with pneumonia. He was born July 4, 1803, and was consequently in his seventy-fifth year when he died. He was a native of Tennessee. * * * Dr. Yandell attended his first course of lectures in the Transylvania University, at Lexington, his second course in the University of Maryland, at Baltimore, where he graduated in 1825. In 1831 he was called to the chair of Chemistry in the Transylvania College, which position he held for six years, when (1837) he came to Louisville and assisted in the organization of the Medical Institute, which subsequently became the medical department of the University of Louisville. He filled, at different times, in the institution, the chairs of Chemistry, Materia Medica and Physiology."

The following report of a committee appointed by the Atlanta Academy of Medicine, was read and unanimously adopted at a regular meeting of the Academy, on the 25th of February, 1878:

The undersigned, a committee of the Atlanta Academy of Medicine, appointed to prepare a suitable tribute to the memory of the late Prof. Lunsford P. Yandell, have had the same under consideration, and ask leave to report:

That it is with unaffected sorrow we are called upon to record the death of this eminent man. He died peacefully, in the city of Louisville, Ky., on the fourth day of February, instant, surrounded by his descendants to the fourth generation, in the full enjoyment of his just fame honorably worn to old age; and, in his varied character of teacher, practitioner of medicine, author, minister of the Gospel, and citizen, he has gone to his final account, without a stain upon his character, or an enemy to asperse his good name.

Dr. Yandell began his career as a medical teacher in the medical department of Transylvania University, at Lexington, Ky. About the year 1825 he was associated with the great Dudley, the father of surgery in the West and South, and McDowell, the first man who removed an ovarian tumor. Also, with Eberle, Caldwell, and others whose names are well known in medical annals. Under their championship the school at Lexington became as famous for medical teaching as those of Philadelphia, New York and Boston. The rapid growth of Louisville, Ky., developed a better field for medical teaching, and Dr. Yandell with most of his colleagues were elected to chairs in the University school, in 1837. He continued in this school until 1857, when the ill health of his family caused his removal to Memphis, where he had been called to take the chair of Theory and Practice of Medicine, in Memphis Medical College. This he resigned in 1862, and sought a higher plane of usefulness as minister of the Gospel. After the war he returned to Louisville, where necessity compelled him to resume his profession, except on Sundays, which he gave to the Church.

Dr. Yandell was an educated man, and loved books and literature. He was also a man of large capacity, and read books to purpose. He has written more voluminously than any of his cotemporaries. He was three times, we believe, the editor of different medical journals, and left his imprint broad and deep upon the medical literature of the country.

It was the good fortune of some of the committee to have known him long, and it is their opinion that a nobler type of our race is rarely if ever vouchsafed to humanity. The ideal of the poet and painter were blended in his symmetrical character and personelle. Never too early; never too late; never wishing to lead, yet always in the lead. Stern to stubbornness where duty demanded; yet gentle as the gentlest, where moral sense interposed. A personal integrity above temptation—a sacred regard for truth that nothing could swerve; a courage that nothing could daunt; a catholic embrace of all that contributes most to the wisdom, happiness and dignity of man.

The committee conclude with the following resolution:

Resolved, That the Secretary be requested to forward a copy of these proceedings to the family of Dr. Lunsford P. Yandell, as a token of the esteem in which he was held by the Atlanta Academy of Medicine.

L. G. ALEXANDER, M.D.,
JNO. M. JOHNSON, M.D.,
W. F. WESTMORELAND, M.D.

On motion, unanimously adopted.

JAS. B. BAIRD, M.D., Sec'y.

EDITORIAL CORRESPONDENCE.

WASHINGTON, ARK., Feb. 1, 1878.

Editor Atlanta Medical and Surgical Journal:

In your December issue, I see a letter from your European correspondent, which, on account of its practical importance, impressed me favorably. The subject, antisepticism, is one to which great attention has been devoted of late, resulting in decidedly valuable discoveries, it seems.

The economical value of the discovery that cotton, by filtering the atmosphere, prevents ingress of the septic material which causes putrescence in a vessel of milk, is certainly very great.

With the view of verifying the statement of Dr. Nunn by personal experiment, I prepared, according to his directions, a couple of bottles. Into these I put fresh sweet milk, and placing them in a water-bath, applied heat to the extent of 212° Farenheit—cotton having been placed over the mouths prior to heating, and every precaution taken against failure in the experiment. One bottle of the milk has been carefully preserved (the other having been broken in the experiment) for three weeks, and although the weather has been ususually warm for the season, I find upon opening the bottle and testing its contents, that the milk is apparently as fresh and sweet as when bottled. The only difference discoverable is consistency, it being thicker.

A very healthy season with us, and an acquaintance of only a few months in this locality affords me not a very large number of cases out of which to select for the theme of my letter. As "stricture" is a special subject to which several Atlanta surgeons have devoted much attention, I would like to hear from my friend, Dr. Shirley B., or some others, on the following case (though not exactly in their line) which, owing to my rather limited experience with obstetrical complications, gave me more annoyance than some "*sure enough*" cases I met with in Atlanta.

The subject, a white woman and multipara, was taken in labor, and partly on account of too early rupture of the membranes, and partly from large size of the child, the case proved vexatiously *tedious*. In addition to these hindrances, the pains were rather weak, but three grains of ergotine increased the throes in such disproportion to the relaxation of the os, that I gave a full dose of morphine. The labor terminated favorably in all things except obstinate retention of urine. No stricture ever closed the urethra more completely against the passage of the urine than this did without the catheter; and being deprived of the ocular advantages we have with the male, catheterism of this kind, to one not of long experience, is more laborious than using the urethrotome or divulcior.

The condition of the neck of the bladder and urethra causing retention in this case, is perhaps not very unusual when the head presses firmly for a long time against the pubis. Catheterism, sweet spirit of nitre and opium occasionally, however, I suppose, will be sufficient treatment till the parts recover from the effects of this mechanical injury. Respectfully, R. W. WESTMORELAND, M.D.

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Original Communications.

THE FOURTH CASE OF PUERPERAL ECLAMPSIA SUCCESSFULLY TREATED BY THE HYPODERMIC USE OF VERATRUM VIRIDE, IN ANSWER TO THE PRIORITY CLAIM OF W. A. GREENE, M.D., MACON, GA.

BY J. W. GRIGGS, M.D., WEST POINT, GA.

The January number of the Atlanta MEDICAL AND SURGICAL JOURNAL, for 1877, contained an article submitted by me, reciting three cases of puerperal eclampsia which I had successfully treated by the hypodermic use of the tincture of veratrum viride. It is now my pleasure to report the fourth.

On Monday, February 25, 1878, I was summoned to see a negress, a primipara, æt. fifteen years, living on the plantation of Mr. Benj. Anderson, in Chambers county, Ala., five miles distant. I arrived at 2½ o'clock A.M., and found her having convulsions every fifteen minutes. She was very stout and considerably swollen, her face and extremities being quite œdematous. There were no symptoms of labor, unless we esteem the eclampsia in such cases to be distributed or misdirected labor. I was informed that she had complained very much of a pain over the crown of the head for several days, and that convulsions had come up the evening before, about sundown. The interval had gradually diminished until fifteen minutes only elapsed between paroxysms. She had been unconscious since early in the night, and was now altogether insensible, frothing at the mouth, with loud, stertorous respiration, the expiratory act accompanied by the greatest noise. The pulse was very full and hard, at about ninety beats per minute. By the time that I had acquainted myself with the facts, a terrible convulsion came up. I now determined to test the unaided powers of the veratrum viride, and, as soon as the spasm passed off, introduced subcutaneously gtt. ij of the tincture. In less than five minutes the convulsion was repeated, and, when passed, gtt. ij were administered. Fifty minutes elapsed, and eclampsia returned more fearfully than ever. As soon as this was over I injected gtt. iv and she slept quietly for two hours, then another convulsion occurred. I introduced again gtt. iv, and the pulse soon went down to fifty-six beats per minute, and I stood sentinel over it, injecting subcutaneously sometimes three drops and sometimes two drops every two or three hours, as the symptoms seemed to require. The treatment was kept up until twelve hours had been passed without a return. I never allowed the pulse to rise above sixty. The patient had received no other treatment up to this time, except the introduction of $\frac{1}{8}$ gr. morph. sulp. with the veratrum, at eleven o'clock A.M., which was given to allay the intense thirst of the patient and to subdue the nausea, which was only slight. This was suggested by my father, Dr. A. W. Griggs, of this place, who came out at this juncture to see how I was getting on. She became more and more conscious every hour after the eclampsia ceased, and now recognized us all, but seemed astonished at our presence. She had frequently called for water for the last hour or two, and now was induced to pass urine for the first time in fifteen hours. She voided over half a pint, and it yielded the greatest per centum of albumen I ever knew.

No symptom of labor having appeared, we succeeded the last hypodermic dose of veratrum, in three hours, by three drops of the same per orem, and leaving her in charge of an intelligent nurse, supervised by Mr. Anderson, we directed that three drops of veratrum be given every three hours, and fifteen drops of chloroform an hour and a half after each dose of veratrum. Thus we determined to keep down the eclampsia and counteract or remove the immediate cause. The instructions to the nurse being well explained we returned home, expecting to be called if anything should go wrong, or if labor should supervene. The next morning we learned that she had passed a tolerably comfortable night, and would have rested better but for the pain over the crown of the head, which was now some better. On Tuesday night they sent in for me, and, arriving, I found that she had had transient pains before noon, which soon stopped, but that labor set in about night.

The treatment had been continued. The pulse being rather weak, the veratrum was now omitted, and the chloroform continued; labor was well nigh completed, and a well developed living male child was born Wednesday morning at three o'clock. The chloroform was now discontinued, and the patient did well until the next evening, when some disturbance occurred in the sensory system—headache and blindness—and, although the urine yielded now but a comparatively small per centum of albumen, the chloroform was again given, and continued twenty-four hours, when all the unpleasant symptoms subsided, and it was discontinued. The patient has been doing well ever since.

Now, I think that this is the first case of puerperal eclampsia ever treated by the veratrum viride, unaided and alone. If I am wrong please inform me.

After I had published my other cases, Dr. W. A. Greene, of Macon, Ga., sent a very courteous communication to the February number of your JOURNAL for 1877, calling me to an account as to priority in the mode of using the tincture of veratrum in puerperal eclampsia. If the doctor had read me closely, he would not have made the mistake. If he will refer to the article, he will see that in my first case, on March 5th, 1875, I at first administered hypodermically ⅛ gr. of morphine without results. Then, after an interval, the convulsions continuing, I inserted gtt. ij. of veratrum viride with morphia sulph., gr. $\frac{1}{8}$, with needle syringe, which produced a marked effect, although an abortive spasm shortly afterwards came on, and she then rested quietly for two hours, when three drops of veratrum tincture were injected, producing the desired sedative effect. "The treatment consisted in keeping the circulation a little below the normal pulse." The doctor will now see that I relied entirely on veratrum after I began its use, and that the remedy was so administered as to keep the circulation below the normal standard.

In case second, the patient had been bled before I saw her—had taken chloral hydrate, bromide of potassium and cold affusions to the head. "There was no abatement of symptoms from the treatment." "The pulse was 100 to 120. We then inserted by hypodermy, morphia sulph. gr. $\frac{1}{8}$, tincture veratrum viride gtt. iij. The pulse sank in thirty-five minutes to 90, and she did not have a convulsion in two hours and a half. Then we noticed an increase in the pulse before the attack came on, which was not so severe as former paroxysms had been. After this, the circulation was closely watched, and the pulse was kept below 70 beats per minute, by the occasional introduction of two or three drops of veratrum, hypodermically." Now, did I not rely entirely on the veratrum in this case?

Case third will show the same confidence on my part. "Before the veratrum was used, the attacks were every thirty or forty minutes; after its use the interval was prolonged to five hours." "There was but little albumenuria in this case." In the concluding paragraph I said: "My father has long been in the habit of using veratrum in puerperal and hysterical convulsions, but I think I am the first to use it in the way described in this paper." Perhaps my language was unfortunate, for although I had never seen Dr. Greene's paper on "Hypodermic Medication," I was aware that my father and others had frequently used veratrum hypodermically. The veratrum, in such cases, was thought a valuable addition to other treatment, and its effects mostly auxiliary. But I used it as the *sine qua non ad rem* for eclampsia.

I would have replied to Dr. Greene before, for I have a high regard for his opinions, but determined not to go before the profession without presenting something for consideration tending to the progress of medical science; so I patiently waited for another case before speaking about the priority claim. I would not detract from the honor or glory of any man battling for science or humanity. I would rather give the helping hand. Dr. Greene's high reputation as a physician, and his devotion to the profession, command the greatest respect, and I hope that he will understand me. His paper on "Hypodermic Medication" is certainly a valuable addendum to therapeutics. He speaks highly of the effects of veratrum administered hypodermically in two cases of puerperal eclampsia. Indeed, he speaks of it as a "most valuable remedy." In his first case he bled until the "pulse had sunk very low." The interval, which had been from twenty to forty minutes between attacks, was now lengthened to about an hour. Then a violent eclampsia came on, and when passed he administered "ten drops of the solution of morphine and atropine, which had the effect to quiet her at once." Another convulsion came on in about an hour and forty minutes. He then injected gtt. ij. of veratrum, which was repeated in fifteen minutes, gtt. iij. being used; afterwards gtt. iv. were used, and the eclampsia ceased. The patient was put on ʒ ss. doses of the potassium bromide every six or eight hours. The circulation was kept under control for two or three days by occasional doses of veratrum, combined with bromide.

In his second case, the convulsions had been coming on every ten or fifteen minutes, until Dr. Hudson arrived about an hour after she had been taken, and he gave her "a large dose of morphine, and put her under chloroform, when the convulsions were delayed an hour or more in their intervals," but again became rapid. On Dr. Greene's arrival, the chloroform was withdrawn, and he "bled her eighteen ounces, and gave her ten drops of solution of morphine c̄ atropia fifteen minutes thereafter; had five convulsions in quick succession, the last one lightest. At 11½ o'clock, A.M., pulse 145; injected one drop of veratrum in a few drops of water. In ten minutes pulse reduced to 130; in twenty minutes to 120; 12¾ a convulsion; eight minutes to 1 P.M., gave one drop veratrum combined with eight drops solution morphine and atropia; pulse 115; 1:25 P.M., pulse 135, and convulsions came on; bled her twelve ounces; 1:32 injected gr. ss. ergotine, combined with gtt. ij. of veratrum in thigh, pulse being 135. In eighteen minutes pulse reduced to 120; twenty minutes no change; twenty minutes more pulse 110; 1½ convulsion; 3:7 pulse 128; os uteri yet contracted and no uterine pain, coma being profound and stertorous, rapid breathing; child alive. Three P.M. ruptured membranes, and injected half grain of ergotine in thigh, combined with three drops of veratrum; 3:45, pulse 120; injected three drops of veratrum, in ten minutes pulse 116, and gave half grain ergotine; some uterine contractions; waters all passed off; os dilated size half dollar; 5 P.M. severe convulsions; 5:40 half grain ergotine injected in abdomen; uterine contractions decidedly increased; coma very profound; 6:45 P.M. convulsions; uterine contraction going on; 7 P.M head of fœtus descended so that forceps could be applied, which was done and a twelve pound child extracted.

Now, it appears that this patient was bled thirty ounces—eighteen at one time and twelve at another—and that morph. and atropia were also used, and afterwards veratrum; again, veratrum, morphine and atropia, the last named being a powerful remedy.

This and the former case were not treated as I treated any of my cases; for my dependence for relief was in the veratrum, and my fourth case, with eighteen convulsions, proves that the veratrum is equal to the emergency in cases of puerperal eclampsia, caused by albumenuria. I will discuss the *modus operandi* of the veratrum tincture in these cases in a future paper.

QUININE.

INAUGURAL THESIS FOR THE DEGREE OF DOCTOR OF MEDICINE IN ATLANTA MEDICAL COLLEGE, MARCH 1, 1878.

BY THOMAS NORTHERN.

Quinine is a sulphate of quinia, one of the alkaloids of cinchona. It occurs in needles of a pearly and satiny appearance. It dissolves sparingly in water, but freely in alcohol and dilute sulphuric acid, and has an intensely bitter taste.

Its physiological action is exerted on the spinal cord, increasing its tone; on the stomach, increasing the secretion of gastric juice, but when long continued, it sets up gastric catarrh. In small doses, it increases the action of the heart and diminishes arterial tension. It arrests the amœliform movements of white corpuscles, and prevents their migration. It diminishes the reflex function of the spinal cord, and is also regarded as an oxytocic. Perhaps most of these actions are the results of the influence exerted primarily upon the spinal cord.

Cinchonism is the term applied to the group of symptoms produced by the use of quinine, in which we have a sense of fullness in the head, a band-like feeling about the forehead, tinnitus aurium, giddiness and vertigo. Deafness occurs when large quantities are taken, and the hearing may be permanently impaired.

The maximum effect of quinine is obtained in about five hours, and elimination is effected, principally by the kidneys in about forty-eight hours.

The incompatibles of quinine are the alkalies and their carbonates, and the alkaline earths. It is also precipitated by the vegetable astringents, the tannic acid of which forms, with the quinia, a white, insoluble compound. Its synergists are the preparation of iron, arsenic and the mineral acids. It is antagonized therapeutically as an agent promoting constructive metamorphosis by mercury, the iodides and the salts of copper, zinc and lead.

Its bitter taste renders it very objectionable to patients, and on this account it is sometimes made into pills and coated with sugar; but when kept for a length of time, they become hard and insoluble, a condition very unfavorable for the administration of a medicine from which a prompt action is often so desirable. Liquorice is often used to hide the bitter taste, but *it* is objectionable to some patients. The most active form in which it can be administered is that of a solution in dilute sulphuric acid.

When, from irritability of the stomach, the quinina is not retained, we may administer it per anum. It is readily absorbed from the rectum, and it is thought by some to act more efficiently in this way; but most observers agree that a larger portion is required when introduced into the rectum. It sometimes happens that neither the stomach nor the rectum will retain the remedy; then, if the condition of the patient is such as to require the effect without delay, as when a paroxysm of pernicious intermittent is expected, we should resort to hypodermic injections. This last method has the advantage of acting more speedily than either of the others, and requiring a less quantity, but it is sometimes followed by abscesses, unless care is taken to have the remedy thoroughly dissolved, and the acids sufficiently diluted not to irritate.

In the use of quinia, we should not forget that some persons are very unpleasantly affected by quinine, even in small doses; therefore, the statement of patients in regard to this should not be disregarded. In such cases, small doses must be given, or some other remedy substituted. Fortunately, where we find this intolerance, we find that very small doses are curative.

The dose of quinine varies with the conditions that call for its use.

It is used in very many affections, but most effectually in malarial fever. The pathology of this disease is supposed to be seated in the spinal cord, and this calls for the tonic influence of quinine to restore tone to this depressed center, and the functions of organs dependent upon this nerve center for their nervous influence.

It was formerly the practice to prepare the system for this remedy by the administration of emetics, purgatives, etc.; but this preparatory course has been found not only unnecessary, but to some extent injurious, by setting up irritation of the stomach and intestines, which may be kept up by quinine, preventing its retention.

There are different opinions as to the time of administering the remedy in the different forms of intermittent. I believe it is considered best to begin in the sweating stage with doses of about five grains, and continuing until slight cinchonism is produced, and then continue such doses as may be necessary to keep up this effect till the time for the next paroxysm is past. If it were necessary to impress the system at once and with certainty, we might begin with doses of twenty-five, or even sixty grains. If we should fail to break up the paroxysm, we should begin in the same way to prevent the next succeeding paroxysm.

In remittent fever, we should select that period in which we have the most marked remission, and we will find that to occur between one and six o'clock in the morning. We should begin with a dose of ten to twenty grains, and continue with doses of from five to ten grains till cinchonism is produced slightly, and if you fail to secure this before the next paroxysm, the remedy may be continued through the exascerbation of fever. As in intermittent, we should lose no time in trying to bring about a remission with purgatives, emetics and diaphoretics, but should begin the remedy at once.

In the pernicious forms of intermittent and remittent fever, quinine is imperatively called for to prevent the recurrence of paroxysm, and it is in this that large doses are required and carried to the extent of quininism.

In typhoid fever, a disease depending upon a different poison and having its seat in a different part from that of malarial fever, quinine is never called for—in fact, its irritating property on the gastro-intestinal canal would contra-indicate its use; but in typho-malarial fever, it is called for in the early stage to subdue the malarial element, but should be suspended, if possible, before the glands of the intestine become involved.

In the anæmic condition following malarial fever, quinine, in combination with iron, is a valuable remedy. It is useful in all the diseases depending on this malarial poison, either primarily or secondarily. It is the best prophylactic of this poison, and after the intermittent form of fever has been subdued, quinine should be continued for three or four weeks to prevent its recurrence, to which there seems to be a special tendency on the seventh, fourteenth and twenty-first days, and on these days, especially, the system should be guarded.

When administered at the critical moment, it is said to arrest the inflammatory process. It is useful, also, in the eruptive fevers.

In all low states of the constitution, and in all diseases depending on a low constitutional condition, you will generally find quinine a valuable remedy, and when anæmia is present, it should always be combined with some preparation of iron.

Reports of Societies.

ATLANTA ACADEMY OF MEDICINE.

J. G. WESTMORELAND, M.D., REPORTER.

ATLANTA, GA., February 18, 1878.

Dr. J. F. Alexander, President, in the chair.

Dr. L. G. Alexander reported a case of hypertrophic elongation of the cervix uteri. The case had been treated, previous to his taking charge of it, by a pessary. The neck, which is one and a half to two inches long, owing to the irritation caused by the pessary, was found engorged and tender, requiring treatment to allay it. Amputation, he thinks the only reliable remedy for elongation, and prefers the galvano-cautery for the purpose.

Dr. J. F. Alexander inquired of members as to the cause of leucorrhœal discharges so frequently met with in female children.

Dr. Baird thought that such discharge frequently occurred in young girls from the irritation of ascarades, which find their way into the vagina from the rectum.

Dr. Wilson thought leucorrhœa often occurs in young females about the time of first appearance of the catamenia, and is probably the result of the unusual engorgement of the organs of generation, which necessarily comes on at this period.

Dr. Baird alluded, in a few remarks, to the existence of ascarades in the rectum of children, which he meets with frequently. The cases which he has been called on to treat have been relieved readily by the ordinary anthelmintic preparation, calomel and santonin, used for the lumbricoides.

Dr. Wilson asked the experience of members with santonin in regard to its poisonous effects. He had used one-grain doses in a child of eight years old, and observed cerebral symptoms, which he attributed to the remedy.

Dr. Baird thought the dose small for the age mentioned, and that the unpleasant symptoms were probably the result of intestinal irritation.

Dr. Simpson agreed with Dr. Baird in attributing the symptoms mentioned by Dr. Wilson to some enteric trouble, and not to the poisonous effects of santonin.

Dr. L. G. Alexander had seen chilous urine in children, to whom santonin had been given, and which he supposed had been produced by the remedy. He had also seen children whose vision had been perverted by the use of santonin, so as to give a bluish color to objects.

MEDICO-CHIRURGICAL SOCIETY.

MONTREAL, CANADA, January 26, 1878.

The President, Dr. F. W. Campbell, in the chair.

Dr. Baynes read his paper on Electrical Therapeutics. The following discussion ensued:

Dr. Reddy related a case of *post partem* hemorrhage, where he used every known means to arrest the flow without avail, until he sent for his "Palmers Apparatus," and used it with perfect success. Also related cases where lumbago had been cured by it; had experienced its good effects in himself. He also spoke of having tried it in tinnitus aurium, constipation, etc.

Dr. Butler said that he had been disappointed in its use in tinnitus.

Dr. H. Howard expressed his interest in the paper, and the great number of cases mentioned in which electricity is said to be beneficial, and expressed the hope that it would do away with the use of medicines to a great extent. Said that in old times he had used it often in tinnitus, but with no good effects.

Dr. Trenholme complimented Dr. Baynes on his paper. Expressed his conviction that electricity would be more largely used in the future. Spoke of its good effects in *post partem* hemorrhage, but thought that hot water injected into the uterus would act with the same results. He was glad that there was such a person as Dr. Baynes in the city, and would be disposed to throw cases in his way.

Dr. Shephard said that hot water had been used in Germany for some time in *post partem* hemorrhage. Expressed his skepticism as to the effects of electricity in it, but has seen it used with success in aphonia.

Dr. Kennedy spoke of paralysis in diptheria. Wished to ask Dr. Baynes about the effect of application of electricity upon the heart.

Dr. Proudfoot said that he had not been much pleased with the results, either in eye or ear cases, from the use of electricity.

Dr. Loverin spoke favorably of the use of electricity.

Dr. F. W. Campbell took exception to the statement, that ergot always did the woman and child harm, whilst electricity never did. He had used ergot very largely for seventeen years, but had never seen any evil effect either to child or mother.

Dr. Reddy had done the same thing.

Dr. Trenholme, also, had never seen any bad effects from electricity.

Dr. H. Howard said that he had once seen a case of rupture of the uterus from the use of ergot in a woman who had previously borne children.

Dr. Baynes, in reply, stated that he had been misunderstood with regard to the action of ergot always doing harm. He said that it occasionally did so.

Dr. H. Howard moved, and Dr. Eddy seconded, a vote of thanks to Dr. Baynes for his admirable paper.

Dr. Nelson related the history of a case of cancer of stomach. *Case.*—A small French Canadian woman, who had a tumor over stomach size of an egg. Eighteen months ago had been in good health. Nine months ago first discovered the tumor herself; had had children; had no history of cancerous disease in any of her family. Drs. Kennedy and Fuller in consultation diagnosed cancer of stomach.

Dr. Loverin proposed a vote of thanks, second by Dr. Trenholme, for the very interesting pathological specimens. *Canada Medical Record.*

MINUTES OF THE PHARMACEUTICAL MEETING.

PHILADELPHIA, February 19, 1878.

* * The following donations to the cabinet were received: From Mr. Neppach, a member of the present class, a specimen of *Barberry* or *Chittem Bark*, from Oregon, where it is used as a tonic and febrifuge; and from Mr. Joseph Jacobs, of Georgia, a specimen of the cotton plant (gossypium herbaceum) with root, stem and the cotton bolls in full development.

Mr. Ed. Gaillard read a paper upon formic acid, and in answer to a question, stated that he had not learned the particular purpose for which the physician wanted the acid. Prof. Maisch called attention to the spirit of ants, officinal in the German and other European pharmacopœias, which is merely an alcoholic solution of formic acid, but is still prepared from red ants.

Prof. Maisch stated that he was experimenting on bromide of iodine, a substance which has long been in use among photographers, in the daguerreotype process for rendering the plates more sensitive, but appears to be likewise used, to some extent, for medicinal purposes; he described it as exceedingly caustic, similar to bromine, and as evidently unfit for internal use in the concentrated state, or in large doses. Recently, through a typographical error in a medical journal, it had been directed instead of potassium bromide in a prescription for epilepsy; the error had been promptly corrected, but it seemed proper to direct attention to the caustic nature of the compound.

Mr. Charles L. Mitchell read a paper upon medicated bougies, giving their history and describing the various kinds in use, and the advantages of this method of medication; he exhibited specimens of the bougies as made by him, and also of Reynal's porte-remede, the former being more serviceable in appearance.

The chairman called the attention of the meeting to the collectsons of one hundred and seventy specimens of North American drugs and preparations made from some of them, which the College had directed to be sent to the Paris Exposition, and after the close of that exhibition to be presented to the Societe de Pharmacie of Paris. At the exhibition the collection will be in charge of Mr. Lindewald, a graduate of the College.

Attention was also called to the recent purchase made by the Board of Trustees of a large balance for scientific uses, especially valuable in enabling the members to have their weights and measures adjusted to the proper standard. An examination of the weights used in another city showed such discrepancies as to render it important that an examination of the weights used by the members of our profession should be instituted at once.

Mr. Shinn was called to the chair while Prof. Remington reported on a series of experiments undertaken by Mr. L. Wolff; having a considerable demand for the albumen of eggs, he was desirous of utilizing the yolks, and this led to the preparation of the fixed oil contained in the latter, and to an attempt of isolating the emulsifying principle, in which Mr. Wolff had been nearly successful. As obtained the principle will readily emulsify oil in water by simple agitation.

The use of fixed oils, in pharmacy, was brought forward, and among others benns oil, obtained from the seed of the sesamum orientale, was mentioned as a remarkably bland oil. Prof. Maisch stated that the chief objection to it was, that, though not a drying oil proper, it gradually became thick and ropy on exposure, and could, therefore, not be advantageously substituted for expressed oil of almonds; a sample of cold cream made by using this oil in place of oil of almonds was exhibited by Mr. Mitchell, and was considered equal to that made by the officinal formula excepting in color. Prof. Maisch said that it was quite a question how much of the commercial expressed oil of almonds was really such—great quantities of apricot and peach kernels were annually consumed to obtain oil from them. The test recommended by Hager will detect the substitution: equal parts of 25 per cent. nitric acid and the oil are agitated and warmed to about 120°F., when almond oil will furnish a white emulsion-like mixture, the other oils mentioned turning yellow or pinkish. (See also "*Amer. Jour. Phar.*," 1877, p. 595.)

A sample of so-called California rock soap had been shown at the November meeting; since that time it has been subjected to a chemical investigation by Mr. Betz, in the laboratory of the College, and proves to be a silicate of alumina with traces of calcium sulphate and iron, showing that it is a species of kaolin, and owes its detersive qualities to its mechanical rather than chemical action.

Prof. Maisch showed specimens of drugs that had been presented to him, as being very beautiful, carefully prepared, and of such superior quality as not often seen in the market; they were the root of archangelica officinalis, the flowering herb of erythræa centaurium, or European centaury; and mana in very large, white flakes.

There being no further business, on motion, the meeting adjourned.—*American Journal of Pharmacy.*

NEW YORK THERAPEUTICAL SOCIETY.

New York, February 8, 1878.

Dr. James R. Leaming, President, in the chair.

Dr. E. C. Seguin, Chairman of the Committe on Neurotics, made the report, of which the following is a brief summary. The experiments in the first instance were made by noting the number of epileptic attacks occuring in a certain number of patients during a certain period of time.

First.—Noting the number of attacks which occurred in a certain number of patients while receiving a placeboic treatment, during a certain period of time, and also the number of attacks occurring in the same patients while under the bromine treatment for a corresponding length of time.

Second.—Noting the number of attacks occurring while under the chloride of potassium treatment, and comparing it with the number of attacks occurring in the same patients during treatment by bromides for a corresponding length of time.

The following were among the conclusions reached:

1. That bromide of potassium had a positive restraining influence over epilepsy, both in reducing the number and the severity of the epileptic attacks.

2. That chloride of potassium was almost inert as an agent in the treatment of epilepsy.

It was inferred that the potassium could not be the efficient element in controlling the epileptic attacks, because the chloride of potassium contained more potassium than did the bromide of potassium.

The formula employed by Dr. Seguin and two of his clinical assistants was as follows:

℞.—Potas. bromid, ... ℥i.
Chloral hydrate, ... ℥ss.
Aquæ . . . . ℥vii.
M.

Of that mixture, from four to six teaspoonfuls were administered daily.

The observations were made by Dr. A. McLane Hamilton, of New York; Dr. J. C. Shaw, of Brooklyn; Dr. E. C. Seguin and two of his clinical assistants, Drs. T. A. McBride and N. B. Emerson. The combination of chloral with bromide of potassium had been used in twenty-eight cases, and it was shown that the epileptic attacks were warded off by the new solution quite as well as by the bromides alone (bromide of ammonium in the same quantity being used instead of the chloral hydrate). The reflex irritability of the throat was reduced equally as well as by the use of the bromides alone.

In all the cases there was a remarkable immunity from the bad effects of the bromides, especially in the psychic sphere, and little or no ache has been produced. In no case was more than forty-five grains of each drug given daily, and really no bad results had been realized under the new treatment.

It had been hoped that the admixture of the chloral with the bromide would diminish the evil results produced by the bromide, such as general depression of the system, irritation of the skin, etc., and those advantages had been partially, if not fully, realized. The good results obtained had encouraged the committee to make more extensive trial of the new mixture.

Dr. W. H. Thompson thought it quite probable that the apparent good effect obtained by the use of chlorals as indicated would prove but temporary.

He always used phosphorus and cod-liver oil with the bromides in the treatment of epilepsy, relying upon the phosphorus to prevent the bromic acne.

Dr. E. R. Squibb remarked that he had not yet found any one who had seen an attack of *grand mal* occur when the patient, at the time of its occurrence, was suffering from bromism. The history of four cases of epilepsy was referred to, which had been treated by the use of bromide of potassium alone. The manner of administration had been to give the drug in gradually increasing doses until the attacks were arrested. Little or nothing had been seen of the bad effects produced by the bromides. Intermissions in the use of the bromide had been given the patient, varying in length from two to ten days, and to these a good deal of the absence of the bad effects of the remedy was attributed.

Dr. F. A. Castle remarked that he had employed chloral and bromide of potassium in combination in the treatment of other conditions than the epileptic, and had found that a less quantity was required than would have been necessary had either drug been used alone.

Dr. E. C. Seguin remarked that his experience was against the omission of the bromide for even a single dose in the treatment of epilepsy.

Dr. Thomson endorsed Dr. Seguin's experience in that particular. He also referred to impressions on the surface nerves as a means for diminishing the quantity of bromide required to control the epileptic attacks. It was his habit, therefore, to produce surface irritation on epileptic patients by the use of a drachm of red pepper to a pint or quart of water, and applying it with a sponge.

Dr. H. T. Hanks remarked that although the effect of the chloral combined with the bromides in the treatment of epilepsy might be merely palliative, yet in that way it assisted nature in affecting a cure of the disease, or gave other remedies an opportunity to operate.

Dr. Squibb referred to the use of nitrite of amyl for the same purpose. It was a remedy which produced effects much more evanescent than those produced by chloral, yet it had been successfully used for preventing the occurrence of epileptic attacks. Although not directly curative, it had proved in many cases a valuable adjuvant in the treatment of the disease, because it obviated the retarding influence produced by a convulsion.

Dr. H. G. Piffard exhibited a proposed new Dover's powder, made by substituting sugar of milk for sulphate of potash in the old formula. He also exhibited pilocarpin, put up in a convenient form for triturating the alkaloid with one hundred parts of sugar of milk.

A specimen of Calcutta flaxseed was also exhibited, which had been suggested as a substitute for cod-liver oil.

Dr. E. C. Seguin objected to the use of the term "trituration," because of its immediate association with a fraudulent school in medicine.

After a brief discussion on this point, the society adjourned.

BALTIMORE MEDICAL AND SURGICAL SOCIETY.

A case which showed either the easy communicability of the autochthonous origin of scarlet fever, was related by Dr. Lynch: In November, 1877, a man sustained a comminuted fracture of tibia and fibula of left leg. The injury was the result of a fall from an upper floor of the State Tobacco Warehouse. The limb was suspended in Smith's anterior splint; in order to obtain better extension, Coskery's splint was afterwards applied. After five weeks the man was attacked by scarlet fever of a severe form, all the characters being well marked. Albuminuria accompanied, and repeated desquamation of the skin followed the fever. No other case of scarlet fever in the house, or immediate neighborhood. After recovery from the scarlet fever, the patient had an attack of pneumonia, to which he succumbed. At the *post mortem*, the peritoneum was found deeply pigmented, almost black in places, showing precedent diffused peritonitis. Strange to say, however, the patient never complained of abdominal pain. The visceral and parietal layers of the peritoneum were firmly adhered to each other.

Dr. Evans related the following case: A young woman had for a week vomited everything taken into the stomach. Had formerly had similar spells; no fever. There was a noticeable depression of the epigastrium, "as if the stomach was absent." Distinct pulsation could be felt in the region. Nothing will relieve the vomiting except morphia, and this does so only so long as the patient abstains from eating and drinking. The Doctor was disposed to ascribe the symptoms to an aneurism of the abdominal aorta.

Dr. Thomas R. Brown related a case of fracture of the scull: About the middle of December, 1877, a drayman was struck upon the head by a stone, fracturing the skull. He fell from his dray, and was carried home in an unconscious condition; he recovered his consciousness during the night, and next day came to the out patient department at the city hospital. The fractured bone was depressed, and through the cleft the brain could be seen pulsating. There were no symptoms of cerebral disturbance. The patient was admitted to the hospital, the wound closed with sutures, and cold water dressing applied. In two weeks he was discharged well, and has so remained. The case was reported to show that energetic surgical interference is not necessary in head injuries, unless symptoms of compression are present. Drs. Lynch, Bates and Morris related cases of similar injuries, where like happy results were obtained by adopting the plan of non-intervention.

Dr. Leonard had noticed in cases of cerebral congestion, and of traumatic meningitis recently under his care, considerable diurnal variations in temperature, simulating remittent fever. He had not been able to find mention of this peculiarity in any work he had consulted.

Dr. A. B. Arnold related a case which he considered one of epileptiform neuralgia, (Trosseau). A man forty years of age, has had for eleven years left-sided facial neuralgia, particularly about the forehead and eyes. The pain is intense. The attacks come on suddenly, and last not over ten minutes; frequently not more than five. The periods of the attacks are irregular. Within the last year and a half other symptoms have made their appearance. Attacks of acute delirium, lasting from ten to fifteen minutes, come on at irregular intervals, sometimes as often as three or four times a day, at others, not over two or three times a week. Like the paroxysms of pain, these attacks of delirium come on without warning. If the patient is engaged in conversation, he all at once stops speaking, bows his head, and begins humming a tune; he does not sing, does'nt articulate—merely hums. If interrupted he flies into a violent passion. This mental aberration passes off as suddenly as it came on, and the individual resumes the conversation where it was interrupted. The paroxysms are all alike; the monotony is never varied. In consequence of his affection, the patient is unfitted for business. The prognosis is bad, as the disease is incurable. Dr. Arnold believes the cause to be intracranial.

As to treatment, nearly everything has been tried. The patient has taken "pounds" of bromide of potassium. The other bromides, belladonna, gelsemium; all the narcotics, in fact, had been tried, and seem but to aggravate the suffering. He has had tonics without avail. Hypodermic injections of morphia relieved the pain during the paroxysms, but did not prevent their occurrence. This was the only remedy relied on at present.—*Maryland Medical Journal.*

CHICAGO MEDICAL SOCIETY.

Regular meeting, Monday, January 21, 1878. President, E. Ingalls, in the chair; 23 members present.

Fibro-sarcoma of lower lid; Extirpation and Plastic Operation.—Dr. F. C. Hotz exhibited a patient aged 54 years, who had come under his care one week ago. He had under his left lower eyelid a round tumor of the size of a quarter dollar: its upper circumference reaching within one-eighth of an inch to the free edge of the lid. The tumor had been growing from a small wart to its present size during the past two months. It was excised, and the triangular defect was covered by the sliding of a flap of integument borrowed from the malar-temporal region. All wounds were closed by fine silk sutures and healed by first union. The morbid growth, which was also exhibited, was limited to the cutaneous tissues, showing a marked hypertrophy of the papillæ, and under the microscope the structure of a fibro-sarcoma.

Heart Disease and Ebolism.—Dr. M. H. Thompson read an elaborate history of the following case: The patient, aged 41, was admitted to the Woman's Hospital, and on November 12th, delivered of a seven month's child. It was her third pregnancy. For six years she had been subject to epileptiform convulsions. With the exception of a slight chill on the fourth day, the patient was doing well until the fourteenth day, when she had a slight fainting fit, supposed to be one of her epileptic attacks; she was found on the floor with the whole right side paralyzed, and no pulsation in right arm and foot, nor in the right carotid artery. The patient became comotose, and died on the eighteenth day after confinement.

The autopsy showed a narrowing of the left auriculo-ventricular opening, so as to admit only the point of the finger; but there was no calcification. A large white fibrous clot in the left ventricle adhered to the wall. A clot was also found in the right common carotid, the right vertebral and left middle cerebral arteries.

(The report did not state whether the right sub-clavian and right iliac or femoral arteries had been examined, in order to detect the causes of the interruption of circulation in right arm and leg.—R.)

Death from a Mixture of Ether and Chloroform.—Dr. H. VanBuren reported the death of a lady, aged 32, and a confirmed opium eater, from the inhalation of a mixture of two parts of ether and one part of chloroform. The patient, as the doctor learned *post festum*, had taken a large dose of morphia a few hours previous to the administration of the the anæsthetic. No autopsy.

Some general remarks were made by a few members concerning the relative safety of ether and chloroform, and then the discussion turned chiefly upon the use of chloroform in labor cases.

Regular meeting, Monday, February 4th, 1878. President, Dr. E. Ingals, in the chair; 15 members present.

Syphilitic Lesions of the Nerve-Centres.—Dr. S. D. Jacobson read a paper which, in a very able manner, presented the present state of knowledge of the subject.

Owing to their curability, the luetic affections of the cerebrum do not often give an opportunity to examine into their anatomical basis. But we may judge of the cases cured from analogy with those that end fatally. In those cases we find lesions of various kinds and in different localities; changes in the bones, the membranes, the nerve substance, and in almost any locality; often they are multiple, sometimes result after pathological processes to be found also in non-syphilitic patients, as hemorrhages, inflammations, anomalies of nutrition; partly are they of a more specific character, especially gummata.

Heubner was the first to call attention to the changes in the cerebral arteries in syphilis. They undergo changes in the thickness of their walls, in their capacity and permeability—changes which, of course, were often overlooked at the *post mortem*. The alteration of circulation produced by those morbid arteries explains the symptoms, and especially their multiformity and variety. In this manner we may understand why severe symptoms sometimes appear suddenly, and that, owing to the removal of obstacles to the circulation, the worst incidents admit of a speedy amelioration.

For the diagnosis of the syphilitic nature of cerebral disorders, it is very important to establish the infection and the previous or present existence of other syphilitic symptoms. And yet, we must bear in mind that a syphilitic patient may become afflicted with cerebral disorders which have no relation to the constitutional disease. It would, therefore, be very desirable to establish the diagnosis from the nervous systems, or at least the prevalence of certain symptoms over others. But, unfortunately, there is not one single symptom which is, *per se*, pathognomonic of the syphilitic nature of a nerve lesion. Every anomaly of function which depends upon cerebral or spinal trouble may be found in cerebral lues, and every single symptom which is found in the latter, may also be found without syphilis. Lues may produce disorders of sensibility and motility of every description, from the slightest abnormal sensation to the most intense pain; from a scarcely perceptible numbness to a complete anæsthesia of every organ of sense; every variety of involuntary movement to epileptiform convulsions; and again, debility from the slightest degree up to complete paralysis of every cerebral or spinal nerve; insomnia as well as somnolence unto the profoundest coma. Disturbance in the psychical functions, abnormal excitement unto raving mania, as well as dullness of various degrees, of the memory, of the mental power, of the judgment, of the will power to complete dementia. In all of those cerebral and spinal symptoms there is nothing specific to syphilis, either in mode or in degree.

We may suspect a syphilitic basis of nervous symptoms if they appear suddenly without any apparent direct cause; if they exhibit a peculiar incompleteness in their development, as, for instance, epileptiform convulsions without loss of consciousness; and especially if symptoms appear in a combination which cannot be produced by one single diseased focus (for instance: ptosis in one eye, and paralysis of external rectus of the other eye; paralysis of the motor oculi and of the facial nerve of the other side; convulsions with paralysis). Very suspicious, also, are the rapid changes of character in the symptoms, such as are found only in one other disease; i. e., hysteria.

In many cases we find, for some time, insignificant symptoms which are overlooked, and disappear from time to time; such are fainting spells, sudden but momentary aphasia, a sudden neuralgia. On account of their momentary duration, the patient himself generally pays but little attention to them. This stage we consider a premonitory stadium. More severe troubles now set in, generally in a sudden apoplectiform manner; such are fainting, sudden aphasia, epileptiform or apoplectiform attack, sudden partial paralysis, blindness; or they may increase in number rapidly, as acute mania or melancholia, stupor, intense headache or other neurlgia, choreic and cataleptic fits, paraplegia.

Quite frequently we observe symptoms which in non-syphilitic affections of the nerve-centres indicate impending dissolution, (as stupor, aphasia, hemiplegia) in specific cases disappear spontaneously, in spite of the poor general condition of the patient; also, that parts which first appear paralysed regain their mobility, while in the opposite half the body a ptosis, a paralysis of. the arm or the like may appear, so that the gravest symptoms alternate, which never could take place if dependent upon an extravasion of blood, or other destruction of the corresponding cerebral locality.

With the exception of the most acute and the too inveterate cases, cerebral syphilis stands a fair chance for successful treatment; spinal lues much less so. By an energetic treatment with iodide potassium or mercury, assisted by hot sulphur baths, we generally have it in our power to alleviate the worst symptoms, and very often to cure the case. In fact, it may justly be said of a patient with severe cerebral symptoms, that his chances for a cure are infinitely greater if he be syphilitic, than if he is not. Many cases that do not seem to improve much in their homes, improve rapidly if sent to hot springs, in combination with specific treatment. In spinal syphilis our success is much rarer and less complete.

In the discussion of the essay Dr. Logan developed his view of the nature of constitutional syphilis in the following words: That there exists a specific virus in connection with each of the contagious diseases, endowed with the property of reproducing itself, there can be no doubt. But his conception of it was not that of an entity which diffuses itself throughout the system. The virus represents in its molecular construction a certain type of morbid action and has the power of inducing and continuing this action in an economy which has not already undergone it. When this virus is brought into contact with a healthy person, it at once sets up an action which ultimately results in assimilating the whole molecular structure of the subject to that of its own. A man, therefore, who has had a non-recurrent contagious disease, atomically and molecularly considered, is a different individual from the one he was before the attack.

Entertaining these views of the whole class of contagious diseases he had no faith in efforts to eliminate from the system the poison of syphilis; and our specific remedies for that purpose were only operative against the morbid movement involved in the diseased action which we called syphilis. The disease is constitutional from the moment the specific virus begins to induce molecular change in the contagious structures; and the primary sore is but the focal expression of the general disease. Why the former should appear at the point of application of the virus is applicable upon the same basis which underlies the production of the vaccine pustule at the point of insertion. The theory of a mere local irritation was barred by the inability to produce a second specific sore upon the same person by inoculation with the specific virus of the first.

Regular meeting, Monday, February 18th, 1878. President Dr. E. Ingals in the chair. Twenty-nine members present.

Shall the forceps be applied with reference to the pelvis or to the position of the child's head? Primary or secondary operation for ruptured perinæum? A discussion on these two questions followed the report of a case of protracted labor, related by Dr. S. Baker. The woman had been in pains over twenty-four hours; the os uteri was dilated; pelvis narrow and child's head very large. Labor pains did not succeed in expelling the head. Chloral in 40 gr. doses had no effect; ergot failed. The doctor then tried to apply forceps with regard to the head, but failed; while, when afterwards, the instrument was applied with reference to the pelvic cavity, the blades could easily be locked; a complete rupture of the perinæum resulted, but the wound was immediately closed by deep silver sutures.

Dr. Van Buren expressed his preference for applying the forceps with reference to position of head, and for the immediate application of sutures to a ruptured perinæum.

Dr. T. D. Fitch thought the weight of authority was in favor of applying the forceps with reference to the pelvis only. The position of the head could be improved in many cases by external and internal manipulations. As to perinæal lacerations, he considered the secondary operation the more judicious procedure, because the new shock by the immediate operation upon the already exhausted nervous system of a puerpera might—and in the only case in which he did the primary operation, the Doctor thought it did—have a fatal effect; also the necessity of a continued constipation would act unfavorably upon puerperal patients. While on the other hand, he did not find that the exposure of a large raw surface to the puerperal secretions increased the danger of puerperal fever.

Dr. Marguerat followed the very simple rule: Apply the forceps the best way you can, and if they lock you may be sure they are properly applied.

Dr. Maynard had found ergot not so infallible in its action as most physicians were disposed to believe. In one case, the contractions of the womb ceased after the expulsion of the child, and could not be induced by external and internal manipulation, ice in utero, ergot and electricity; but they were speedily and energetically produced by one ounce of whisky. When the effect of this dose was spent, the uterus began again to relax, and nothing short of a repetition of the dose of whisky would stimulate it.

Dr. E. F. Ingals mentioned a case of *post partem* hemorrhage, due to atony of the uterus, which was speedily arrested by injections of hot water.

Before adjourning, the president appointed a committee of three to confer with a similar committee of the Society of Physicians and Surgeons, in reference to uniting the two medical societies, and suggesting such changes in the plan of organization as they might deem practicable. —*Chicago Medical Journal and Examiner.*

Selections.

PENNSYLVANIA HOSPITAL.—CLINIC OF DR. J. M. DA COSTA.—*Salicylic Acid in Acute Rheumatism.*—The patient is twenty-two years of age, and a widow. She inherits the rheumatic diathesis from her father. Last Christmas she took cold, and was confined to bed with chills and fever for a week. Her knees at that time began to swell, and grew red and painful. From that day until now the rheumatism has steadily progressed, involving joint after joint, until it has finally attacked the fingers. The case has plainly been one of an essentially migratory character. First one joint would be affected, then in a day or two the pain and swelling would leave that joint and settle upon another. So the disease has gone on from bad to worse, until, after a partial recovery, followed by a dangerous relapse, the patient was admitted to the wards on February 5th. Her temperature was 101°, with a slight falling remission of less than 1°. The akle-joints, the left in particular, were very much swollen, looking as if they had borne the brunt of successive attacks.

Soon after admission, ten grains of salicylic acid were administered, and the dose repeated every hour until six doses had been taken. The amount of the dose was then reduced so that about a drachm of the acid would be taken in twenty-four hours. The results of this treatment were most striking. On February 8, three days after admission, the temperature fell to 99½°; on the following morning, it was down as low as 99°. This represents the record of last night and this morning.

There has also been a very marked change in the condition of the woman's skin. Upon admission it was harsh; now the skin is soft and the perspiration gentle. The reduction in the amount of pain has been very great. To-day, in fact, the woman is almost free from pain, and can move all her joints except the ankle-joints, without giving rise to any pain whatsoever. The swelling in her hand has wholly disappeared, except in the first metacarpal joints, where there is still some slight stiffness and swelling. The left ankle is also still sore.

After all, however, I am not inclined to lay much stress upon the disappearance of all the external signs of the attack. The internal symptoms of acute rheumatism are always the most dangerous ones. Upon admission the patient exhibited, upon careful auscultation, a slight pericardial friction-sound. This morning I examined her chest again, and although still present, the sound was very slight. One of the good results of our treatment has therefore been that the pericarditis has not been followed by an effusion. There are at present no valvular sounds. I ought to say, just here, that enough morphia was administered in conjunction with the salicylic acid to quiet the patient and ease the paroxysms of pain. The pericarditis was checked by the application of a blister over the heart on February 6, and by subsequent poulticing of the blistered part.

Before sending this case out, I wish to call your attention to four or five points connected with it. Let us (1) examine the state of the left foot and ankle. They are much swollen, and the swelling is not confined to the joint, but has involved all the tissues of the foot. This condition of things is an unusual one, being but rarely found in acute rheumatism. Here the successive attacks, settling on the same joint, have brought on a persistent, inflammatory thickening. This condition will, I fear, result in a permanent stiffening of the joint, a partial anchylosis, such as often succeeds rheumatic gout. We may have an abscess formed. To sum up, we may have certain marked local changes taking place which are unusual in rheumatism, except as sequences of successive localized and unrelieved attacks. There is generally no permanent lesion of the joints or of the connective tissue. Here I fear an exception to the general rule.

I would call your attention (2) to the wonderful effects of the acid in this instance. There had been frequent relapses, and all other treatment had failed, and yet all the symptoms were entirely controlled in three days by the new remedy. You should remember that, as a general rule, if salicylic acid acts at all, it acts promptly. Therefore, salicylic acid, or the salicylate of sodium, to be successful, must be promptly so. If it does not cause a change for the better in the course of two or three days, give it up and try something else. If the acid had shown no good results by to-day in the case of this woman, it would have been useless to continue the treatment longer.

There is a great disadvantage (3) in the administration of large doses of salicylic acid. They may bring on fatal depression. Less than a drachm of the acid in the course of the first twenty-four hours is useless. You ought to be able to administer as much as a drachm and a half without producing any bad results. I prefer the salicylate of sodium to the uncombined acid; it is better borne by the stomach, and can be given in larger doses. I repeat what I said before: there is danger of great prostration following the use of large doses of the acid; therefore, if the pulse becomes feeble and the patient delirious at any time, stop the remedy instantly. Deaths have been reported as following this very prostration and delirium. Another thing: never give salicylic acid in cases of cerebral rheumatism. It is prone of itself to produce dangerous cerebral symptoms.

What (4) about the pericarditis? Has the salicylic acid any influence on pericarditis and endocarditis? What change of treatment does their presence indicate? We must have definite opinions upon these subjects. Salicylic acid has no effect whatsoever upon the cardiac complications of acute rheumatism. Over the fever and pain and swelling it exerts, as you have seen, an excellent influence. Upon the pericarditis and endocarditis it has no effect whatsoever. Where these complications exist you had better unite with the acid some other remedy. In this instance a blister was all that was necessary. In more severe cases, give large doses of digitalis, or of acetate of potassium.

What (5) shall be the after-treatment? The rheumatism has been checked by salicylic acid, and the heart affection has yielded to blistering. There still remain the local thickening and inflammation of the ankle-joint. What shall we do for that? How try to prevent the occurrence of partial anchylosis? I shall order a series of small blisters applied. The part shall then be enveloped in warm-water dressings, so as to keep up constant moisture and secretion. Chronic thickening may haply be thus prevented. In the meanwhile, we must not give up the salicylic acid. We will, however, reduce the dose to forty grains in the course of the twenty-four hours. If the woman shows any tendency to relapse, I shall order her placed on quinia. In all cases of this kind, whether my treatment has been by the alkalies, by large doses of the bromides, or by salicylic acid, I have always treated relapses with quinia. To prevent the recurrence of relapse, I will have this patient take twelve grains of quinia daily. As regards diet, she must have milk, eggs, tea and toast, and occasionally oysters and meat. We shall watch carefully the pericarditis, and apply repeated small blisters to the ankle, followed by fomentations.

Before dismissing the subject, I wish to show you this *post-mortem* specimen of acute pericarditis. The girl from whom it was taken was admitted to the hospital in a dying condition. She had extensive pericarditis with effusion, pneumonia of the right side, and pleurisy of both. Under this complication of disorders, she rapidly succumbed. You see that the whole pericardium is covered with thick lymph. Where pericarditis has reached that stage it is next to impossible to check it. I have brought this specimen before you to show you what pericarditis, in its most advanced stage, really is.

The Hypodermic Injection of Dialyzed Iron in Chlorosis.

A. L., aged 21 years, single, has a history of hereditary lung trouble. Thus far the girl herself has given no evidence of any pulmonary disease. She has never had malarial fever nor rheumatism. Last spring she began to feel badly. She lost strength and health, and suffered from frequent attacks of palpitation and dyspnœa. On Christmas last the symptoms became worse; her legs and feet began to swell, and she passed more water than normal. At present her appetite is fair, her bowels are regular, and she sleeps moderately well. There has been a total arrest of the menses for the past three months. Her digestion is only fair. There has been no loss of flesh.

This is a typical case of chlorosis. There are several questions, however, which must first be settled before I proceed to tell you of my new plan of treatment. Is (1) the marked anæmia present in this case connected with any organic cause? And (2) is the swelling of the lower extremities due to cardiac disease, or to disease of the blood? The girl's temperature is about normal, with a range of from 98° in the morning to 99° in the evening. You notice how pale her tongue and gums are. The conjunctiva is pearly, and the ears are pale. Examining the heart, I find that it beats very rapidly. This is probably largely due to the excitement of being before the class. Even in the wards, however, it beats rapidly. The heart-sounds are sharply defined. There is no sign of valvular disease. On the right and left side of the base of the heart I hear a soft systolic murmur. There is no enlargement of the heart. The murmur which I hear is undoubtedly a blood-murmur. This murmur is faintly transmitted into the carotids. I can distinguish a very marked "venous hum" in the jugulars. I have never heard this hum so plainly before. The "venous hum" is a sign of extreme anæmia. I find no cause whatsoever of circulatory disturbance. I see only the signs of a change in the condition of the blood. There is no disease of the liver, lungs, spleen or uterus; no organic trouble anywhere. We call cases of this kind by the name of chlorosis. We are unable to find out why the blood is changed. This girl's blood has been examined microscopically. There is no change in the relative proportion of white to red blood-corpuscles. There is, however, a slight deficiency in red corpuscles. This could not be properly called a case of leucocythæmia. It is undoubtedly chlorisis—menstrual disorder, connected with deficiency of the red blood-corpuscles. The palpitation, dyspnœa, and swelling of the feet are symptoms of the deficiency in the red element of the blood, and not the results of any organic disease.

The girl has improved vastly under treatment. She is getting plenty of rest and good food, but she had them both in abundance before she came to us. Her rapid improvement is altogether due, I think, to a new remedy which I am employing in a very novel manner. I refer to the rapid introduction of iron into the girl's system by means of the hypodermic needle. Why has this not been practicable before the present day? Because it has been wellnigh impossible to obtain a non-irritative form of iron for hypodermic use. The tartrate of iron, although one of the mildest forms, is entirely too liable to cause irritation and abscesses. Lately a new preparation of iron, the dialyzed iron, appeared in the market, which, it is claimed, is neutral and non-irritating. It struck me at once that this was just the thing to be used in my proposed hypodermic injection. I have been using this dialyzed iron hypodermically in this case for the past few days, and it has come fully up to its reputation. There have been none of the usual after-effects of iron, such as costiveness and disordered digestion. All these are done away with.

antagonistic treatment. He was led by some facts coming under his notice, "to infer that it was impossible to vaccinate successfully a patient who was at the time under the medicinal influence of arsenic." In other words, it is impossible to put the system in a condition temporarily unsusceptible to the "*contagium vivum.*" He applied this mostly to the use of arsenic as an antiseptic in cases of actual attack. So important do the facts seem to the reviewer, that he says, if they are corroborated by other trials, the value of such treatment will be but little less than that of the discovery of vaccination. The paper of Prof. Hogden, on Antiseptic Surgery (International Medical Congress, 1977) is worthy of reading in its bearing on antiseptic medicine. The third conclusion is, "It is possible that the living solids and liquids of the body may be so altered that they shall not furnish the conditions necessary to putrefaction." So, as to zymotic diseases, I believe we are yet to come to a recognition of our power by the use of medicines in advance to protect from prevalent epidemics. One class of agents may do it by the action of presence, another by chemical reaction; another by such antiseptic action as suspends excessive metamorphosis, or so deals with debris as to render it innocuous. Others, as is claimed for ammonia and liquor potassæ, retard the coagulation of fibrin. We are no longer confined to chemical antidotes, although these may operate upon disease toxics as well as others. Ergot and nitrate of amyl affect the calibre of blood-vessels, on a plan different from that of gallic acid.

Oxygen, electricity, ammonia, etc., are showing powers quite different from those of an alkali upon an acid. Just now we are not so concerned about the theory of action as about the fact. The need is to accumulate evidence by those whose trials are exact in the details of method and in the record of results. We cannot at present be decisive as to all the agents which interfere with zymotic infections, or as to those which are especially adapted to each particular form. We need only now indicate those upon which we have relied, and the method of their use. The articles themselves are not new, but they are claimed to be preventives, to be used before any manifestation of disease in the individual. We shall here merely outline the method of individual sanitation adopted in diphtheria and scarlet fever as a specimen of the general course of management.

In the case of all children in the family beside the one attacked, give the skin a washing or wiping each day with lukewarm carbolic wash of the strength of Squibb's 2 per cent. disinfectant solution of the mixed phenols. As we have always inclined to the view of a localized planting or absorption, we use frequent local treatment. .A gargle of chlorate of potassium three grains, tinct. chloridi ferri three drops, water three drachms, is to be used frequently in the mouth, and some of the same is used about the nostrils. Frequency at first is far more important than quantity. Employ both what is used as gargle and for administration every two hours in the day, and every two or three hours between 10 P.M. and 6 A.M We give internally every three hours the same amount as named above for a gargle, and every two hours if there has already been more than two days of exposure. After one or two days the chlorate of potassium and the iron can be detected in the secretions. So the buccal cavity and the fauces have a share from this source, and the local use may be lessened one-half in frequency. The design is not to leave the mouth or the system without the indicated presence of these two articles, during what would be the prodromal stage of the disease. In diphtheral exposure we give in addition two grains of quinine twice, each six hours apart. It is important to have the tincture muriatis ferri of that made several months, and in its purest form, in which, and in which only, it contains the "sesquichloride of iron, muriatic acid, and alcohol, and from the reaction of the last two ingredients muriatic ether." "It is," says Wood, "possessed of peculiar properties, probably in some measure owing to the ether which it contains." In the preventive method for scarlet fever we do not use quinine. In addition to the diphtheral treatment we use Calvert's carbolic acid in a weak solution twice per day, and cleanse the teeth and mouth with a tooth-powder of equal parts of chlorate of potassium and powdered gum arabic. More attention is to be paid to a restriction of animal food with children who are full habited, and if the iron produces any constipation, as it generally does not, a mild cathartic is of service. Fuller particulars as to these or other diseases are not needed beyond those given in previous articles, and until more observations from others are accumulated. Reports either of failure or of success need to be explicit as to the length of medication and the precise frequency, and the whole amount of preventive used; also as to the degree of severity in cases in which attack is not avoided. Our position as to the plan of prevention is not that of dogmatism, but only that of an impressed inquirer. Sir Thomas Watson has ably written on the abolition of zymotic diseases, from the stand-point of outside sanitation. There is internal sanitation as well. We do not fasten our faith to any one remedy, but believe there is a field of observation in the area of personal disinfection and antiseptic provision which may yet show us how to invalidate the title and so take possession as to dispute the occupancy of many an infective disease. It is not by large dosing or inadvertent medication, but by that intelligent supervision and timely contravention which make the ounce of prevention more potent than a pound expended for attempted cure—too often failing just because the vicious poison has already so affected fluids and functions and organs as to impede those processes which are not less indispensable for the physiological effect of medicines, than for that of all vital repair.

If "antiseptics may alter the tissues of a wounded surface so that, though septic matters are present, they may not be absorbed," and if living solids and liquids may be so altered that they shall not furnish the conditions necessary to the development of disease, we will not despair of "prohibiting," of "having beforehand" in the system unsusceptibility to the invaders, such as will not respond to their attempt at sovereignty.—*Medical Record.*

Editorial.

UNETHICAL ADVERTISEMENTS.

The founders of our present medical code took a proper view of human nature when they condemned the lauding of medical men for extraordinary cures, by hand-bills, circulars, or advertisements in secular papers. The afflicted are favorably impressed by ingeniously-gotten-up reports of cures, thrust upon them in every conceivable way, and hence the most liberal and unscrupulous advertiser is consulted, though he may be entirely destitute of medical and surgical qualifications. The professional prohibition, intended more for the protection of the public against those who seek fame without medical knowledge, than otherwise, signally fails of its object by not having any control of those outside the profession. The distinction is not known to the public, and if the prefix "Dr." or appendage "M.D." accompanies the advertiser's name, he is supposed to be entitled to their confidence. Men who know as little of medicine as those they seek to dupe, assume the title with impunity, and thus the world moves on.

We are frequently interrogated in regard to the qualifications of outsiders in the city, advertising specialties, and the answer we give is doubtless often attributed to jealousy toward the celebrated advertiser. Barnum understood human nature when he said mankind wants and must have humbuggery. It is, therefore, probably the best answer for such enquirers to say, go and be humbugged, and then you will know for yourself. Honorable, intelligent physicians throughout the country are often deceived by such specialists, and send their patients to them, supposing they are regularly connected with the profession.

As we say to them privately we now say to all—whenever, in circulars or newspaper advertisements, extraordinary cures, with or without pictures accompanying them, are paraded before the public, the writer is seeking to make known advantages over other practitioners which he does not possess, and is likely an unmitigated fraud.

ATLANTA MEDICAL COLLEGE.—The commencement exercises of this institution took place at night on the first of March, inst., in presence of a large audience.

The Dean's report showed the college in a prosperous condition, and more than usual emulation amongst members of the graduating class for prizes offered, and distinction for proficiency in a knowledge of the medical sciences. The graduating class was said to rank somewhat above the usual average.

The degree of M.D. was conferred by Col. W. L. Mitchell, of Athens, Georgia, one of the Board of Trustees, in his usual happy style, on twenty-four applicants, as follows:

George W. Blanton, George W. Burnett, Walter A. Camp, C. J. Church, Thomas M. Dean, B. L. Embry, John F. Fielder, A. B. Frix, J. E. Gillespie, E. T. Gauntt, I. J. Goodman, H. B. Harper, S. W. Johnson, W. R. K. Johnson, Lyman H. Jones, Lodrick M. Jones, Isaac Keeler, L. A. Lee, Thomas Northen, J. D. Orr, J. B. Reynolds, J. T. Selman, W. L. Wilkinson.

The valedictory on the part of the class was delivered by Dr. G. W. Blanton, of Dalton, in a very interesting manner, and responded to by Maj. R. N. Ely, Attorney-General of the State, to the satisfaction of all present.

Dr. J. H. Logan, Professor of Chemistry in the College, in a becoming manner awarded prizes as follows:

The prize offered by the faculty for the most thorough preparation in all the branches (a case of surgical instruments) was awarded to Dr. S. W. Johnson, of Cumming, Georgia; also, a medical case offered by the Professor of Materia Medica for the best thesis on the "Action of Remedies."

Honorable mention was made of Drs. J. B. Reynolds, Thomas Northen and Walter A. Camp as next in grade to the successful competitor.

A case of urethral instruments, offered by the Professor of Anatomy for the best thesis on "Stricture of the Urethra," was awarded to Dr. W. L. Wilkinson. A case of obstetrical instruments, offered by the Professor of Obstetrics for the best preparation in his branch, was awarded to Dr. W. A. Camp. A case of transfusion instruments, offered by the Professor of Surgery for the greatest proficiency in his branch, was awarded to Dr. J. B. Reynolds. An ophthalmoscope, offered by the Professor of Diseases of the Eye and Ear for the best thesis on "Diseases of the Eye," was awarded to Dr. W. A. Camp.

MEDICAL ASSOCIATION OF GEORGIA.—As announced in the February number of this JOURNAL, the annual meeting of the Medical Association of Georgia will take place on the third Wednesday, 17th of April, prox.

The physicians of Atlanta, we believe, will show their appreciation of this useful institution, not only by a general attendance during its deliberations, but by extending a hearty welcome to members from other parts of the State. We know of nothing likely to mar the harmony and good feeling which should and generally does exist at these reunions of the profession in Georgia.

We have always felt a lively interest in the Association, having been connected with it from its inauguration in 1849, as the record shows, but one or two years before that time, according to our recollection of the date. About thirty years, then, except about six years during and immediately after the war, has the Association held annual meetings.

A yearly change in the place of meeting being thought necessary to the success of the Association, the migratory system was adopted early in its history. The permanent organization was had in the city of Macon, according to my recollection of the time, in 1847 or 1848, one or two years earlier than the record of membership indicates. I very well remember my admission to membership when the meeting was held in rear of and near the Floyd House, at which the venerable Dr. L. D. Ford, of Augusta, then in the prime of life, was elected President, and so far as I know, the first regularly elected presiding officer of the "Georgia Medical Society," as I think it was then called. Since that time, changes have been made not only in the name, but in the time of electing officers. Dr. Ford, the first President, was elected at the meeting at which he presided, and so of other succeeding meetings, perhaps. Now the President is elected at the close of a session, to be inaugurated at the opening of the succeeding annual meeting.

To Macon must be awarded the honor of a mother's fostering care, and to Dr. Ford, our cherished preceptor, the distinction of giving the institution paternal direction which has resulted in a successful career of usefulness.

AMERICAN PHARMACEUTICAL ASSOCIATION.—We have, during the year not only the meeting of the Medical Association of Georgia, but also that of the "American Pharmaceutical Association," which meets in Atlanta on the first Tuesday in September next.

This organization has been in successful operation for about twenty years, and held its last session in Toronto, Canada, last September. The Association with great unanimity decided to hold the next annual meeting in Atlanta, at the suggestion of our friend, Mr. Ingalls, of Macon, Georgia, who is a member of that body, and who was elected Vice-President of the Association. In the October number of this JOURNAL, a synopsis of the transactions at Toronto was given, and we shall take pleasure in making a full report of the proceedings of the meeting to be held here in September.

The successful treatment of disease by physicians is greatly facilitated by advancement in practical pharmacy, and we take pleasure in promoting, by any means at our command, progress in this useful science.

GEORGIA PHARMACEUTICAL ASSOCIATION.—The third annual meeting of this body will be held in Augusta, on the second Tuesday, 9th day, of April, proximo.

The organization of this association was effected in Macon, on October 20th, 1875, in pursuance of a call by Dr. Fred King, of Atlanta, and Mr. S. W. Hunt, of Macon; and the first annual meeting was held at the same place on the 11th of April, 1876. We learn that important matters will be considered at the approaching meeting in Augusta, and that a full attendance is, therefore, desirable.

VACCINATION.—Jenner's great discovery of preventing small-pox by vaccination, gives mankind the power of avoiding one of the most painful, loathsome and dangerous diseases to which people generally are subject. Strange to say, however, many absolutely refuse this almost infallible safeguard against the disease, depending on keeping aloof from those affected. This seeming recklessness of health and even life may be, in part, accounted for in the fact that spurious vaccination sometimes leads to very unpleasant consequences without affording the desired protection. It is, therefore, important that physicians exercise great caution in securing reliable vaccine virus.

In order to protect her citizens against small-pox and against the too frequent liability to spurious vaccination, the State has made provision for a supply of genuine virus. To this end the Governor has directed that physicians throughout the State be supplied free of charge by addressing J. G. WESTMORELAND, M.D.,
14 Loyd street, Atlanta, Ga.

TO OUR SUBSCRIBERS.—With this number of the JOURNAL many subscriptions expire. We trust that our friends will promptly remit their renewals. Our bills for publishing the JOURNAL fall due monthly, and have to be paid. We think it is not asking too much to expect our subscribers to be alike prompt in paying for the JOURNAL. Many have written us, promising to pay at a given time, but the time has passed, and they have failed to comply with their promises. We cannot publish the JOURNAL without money. Remit by draft, P. O. money order, or registered letter, to H. H. DICKSON.

PAMPHLETS RECEIVED—*Compulsory Vaccination.*—The Establishment of a Uniform System of Vaccination for all Citizens and Inhabitants of the State of Louisiana, by Legislative enactment. By Joseph Jones, M.D., Professor of Chemistry and Clinical Medicine, Medical Department

University of Louisiana, etc., etc. From *The New Oleans Medical and Surgical Journal.* January, 1878.

On the Recognition and Management of the Gouty State in Diseases of the Skin. By L. Duncan Bulkley, A.M., M.D., Physician to the Skin Department, Demilt Dispensary, New York, etc. Reprint from the *American Practitioner.* November, 1877.

On the So-called Eczema Marginatum of Hebra (Tenia circinata cruris) as observed in America. A clinical study. By L. Duncan Bulkley, A.M., M.D., Physician to Skin Department Demilt Dispensary, etc., etc. Eczema and Psoriasis. By the same author.

The *Druggist & Chemist*, by C. C. Vanderbeck, M.D., Ph. D., Editor and Proprietor, is published by D. G. Brinton, M.D., at his Medical Publication Office, 115 South Seventh street, Philadelphia. This is a sprightly monthly of twenty pages, devoted to materia medica, pharmacy, chemistry and therapeutics, and sent to subscribers at $1.50 per year, in advance.

Studies in Pathological Anatomy. By Francis Delafield, M.D. This monthly contains five quarto pages of reading matter on pathological subjects, and three pathological plates each month, for $5.00 per annum.

Braithwait's Retrospect, and Brinton's Half Yearly Compendium of Medical Science, for January, have been received, and afford a treasure of recent medical literature.

EDITORIAL CORRESPONDENCE.

LURAVILLE, FLA., February 28, 1878.

Editor Atlanta Medical and Surgical Journal:

Seeing so much written about belladonna, induces me to contribute my mite.

August 23d, 1877, was called at 4 o'clock, P.M., to see W. J., male, æt. 8 years. Upon examination and inquiry as to previous history, I diagnosed remittent fever. Up to this time he had had fever two days, which was not "very high," as the mother expressed it, with the usual abatements. He had taken nothing except calomel, which acted "tolerably well." All the secretions were in apparent good action; I therefore ordered nothing but that great *Dei donum*—quinia sulphas—and directed it to be taken in large doses. I left, not anticipating much trouble.

24th, 2 o'clock, A.M., was called hurriedly. Found patient in a state of intense febrile excitement, with slight delirium. Administered a dose of morphia, and used diaphoretics and arterial sedatives at intervals as I saw proper, keeping up, at the same time, the use of the quinine. The pulse was reduced from 150 to 130 during the following day. Called again at 7, P.M.; bowels somewhat distended, with tenderness on pressure. Finding there must be some intestinal obstructions, I gave a large dose sulph. magnesia, per orem, together with cathartic enemas, which produced several small, watery stools during the night.

25th. Found my patient no better. Though the fever was not so high as it had been, the bowels were more largely swollen, and now became the subject of serious consideration. Efforts to rid them of their irritating contents were persevered in during the day, with only partial success. The quinine had been continued at intervals of two hours, though there was not the slightest indication of its being absorbed. At 6 P.M., I gave one-ninth gr. ext. belladonna, by mouth, and in about two-and-a-half hours a profuse, hard, fecal discharge followed, in which was discovered the hulls of grapes, wholly undigested. Intense tinnitus aurium, produced by the quinine, was complained of. The fever gradually abated, and the patient made a speedy recovery.

I have hastily recited the above case from memory, without comments, simply to direct the attention of the profession to the twofold action of the belladonna: first, in removing the intestinal obstruction by paralyzing the nerves supplying the circular muscular fibres of the intestines; and, secondly, its peculiar action upon the nervous system, exciting a condition by which the quinine exerted its usual effect. P. A. McIntosh, M.D.

EXCERPTA.

INTRA-UTERINE INJECTION OF HOT WATER IN POST-PARTUM HÆMORRHAGE.—Dr. Runge gives an account of the results obtained by Professor Gusserow, of Strasburg, by the use of hot-water injections in cases of post-partum hæmorrhage. The cases cited are seventeen in number. Ten of the patients were the subjects of simple post-partum hæmorrhage, and in seven the hæmorrhage followed an abortion or a labor after which portions of the placenta had been retained. The instrument used was usually an irrigator, although in some of the cases an ordinary syringe was employed. The temperature of the water varied from 118° to 125° F. In two out of the ten cases of simple hæmorrhage, the effect of the injection was remarkable and prompt, although the usual remedies employed in such cases had been first tried without avail. In five of the cases this was the only treatment used, and with immediate relief. In two of the cases the result was doubtful, and in the last case no result followed, although the injection was continued for half an hour. As regards the hæmorrhage arising from retained portions of the placenta, there was no effect from the use of the hot water until the placenta fragments had been removed. The injection of the water did not seem to hasten the uterine contractions.

The great advantage which seemed to favor the use of hot rather than cold water for injections in such cases is that, in stead of abstracting warmth from the body, which is greatly needed in many of these cases, we are really adding to the amount of the animal heat of the patient. In all these cases it was noticed that the uterus did not become as hard, and consequently not as small as after a normal birth. Carbolic acid may, of course, be added to the water if desired.—*Boston Medical and Surgical Journal.*

SCIATIC NEURALGIA.—I was called to see Fred W., aged 31, on January 1, 1878. Found him suffering intensely from neuralgia of the great sciatic nerve. Learned from him that he had suffered more or less from this disease for about a year. Had taken quinia, strychnia, and morphia, internally, the latter to such extent as to render it difficult to do without it. He had used stimulating and anodyne applications locally as well as a series of blisters over the course of the nerve. I commenced the treatment of this case by using the continued current over the course of the nerve, from its origin to its termination, on the outside of the foot. After second application of the battery improvement began, but as the pain persisted to an uncomfortable degree in the region of the popliteal space, after the fourth application of the battery I injected one forty-eighth of a grain of sulphate of atropia, hypodermically, over the seat of the pain. In a short time the pain was gone, and has not returned since. The hypodermic injections of sulphate atropia, in one forty-eighth grain doses, were repeated two or three times, as was the galvanism also. I consider this case of sufficient interest to merit a report: 1. Because of the comparative long duration of the disease without getting any relief to speak of, the patient having been under the care of a physician all the while, and for the four weeks previous to my first visit, confined to the house, and to the bed for most part. 2. The prompt response to the remedies made use of. Which of the remedies, the electricity or the atropia, had the most to do in bringing about the result above stated, we leave it to the readers of the *Reporter* to judge; however, I believe that the electricity would have effected a cure after a little time, but that the atropia materially hastened the desired result.—*Medical and Surgical Reporter.*

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